PIONEER
NATURAL RESOURCES USA, INC

March 12, 2007

Bureau of Land Management
Vernal Field Office
170 South 500 East
Vernal, UT 84078
Attn: Mineral Resources

Re: 2007 Applications for Permit to Drill (APDs) in Uintah County, Utah

To Whom It May Concern:

This letter is to inform you that beginning January 2007 to December 31, 2007 Permitco Inc. is authorized to act as Agent and to sign documents on behalf of Pioneer Natural Resources USA, Inc. when necessary for filing county, state and federal permits including Onshore Order No. 1, Right of Way applications, etc., for the 2007 drilling program in Uintah County, Utah.

It should be understood that Permitco is acting as Agent only in those matters stated above and is not responsible for drilling, completion, production or compliance with regulations.

Pioneer Natural Resources USA, Inc. agrees to accept full responsibility for operations conducted in order to drill, complete and produce the above-mentioned well.

Sincerely,
Pioneer Natural Resources USA, Inc.

David N. Holland
Environmental Manager

1401 17TH STREET, SUITE 1200 · DENVER, COLORADO 80202 · MAIN: (303) 298-8100 · FAX: (303) 298-7800

PETROLEUM PERMITTING
PERMITCO
COMPANY

14421 County Rd. 10 • Ft. Lupton, Colorado 80621 • (303) 857-9999 • FAX (303) 857-0577 • E-MAIL Permitco 1@aol.com

November 16, 2007

Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, UT 84114-5801

Attn: Diana Mason

Re: Pioneer Natural Resources USA, Inc.
PINE SPR FED #12-28-14-22
2020' FNL and 807' FWL
SW NW Section 28, T14S - R22E
Uintah County, Utah

Dear Diana,

Enclosed please find one copy of the Application for Permit to Drill, along with the required drilling program, BOP diagram, wellsite maps and diagrams.

If you should need additional information, please don't hesitate to contact me. Approved copies of the A.P.D. should be sent to PermitCo Inc. at the address shown above.

Sincerely,

PERMITCO INC.

Venessa Langmacher

Venessa Langmacher
Consultant for
Pioneer Natural Resources USA, Inc.

Enc.
cc: Pioneer Natural Resources USA, Inc. - Denver, CO
Pioneer Natural Resources USA, Inc. - Rangely, CO

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DIV. OF OIL, GAS & MINING

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 3

AMENDED REPORT ☐
(highlight changes)

APPLICATION FOR PERMIT TO DRILL

5. MINERAL LEASE NO.:	6. SURFACE:
UTU-10199	BLM

1A. TYPE OF WORK: DRILL ☒ REENTER ☐ DEEPEN ☐

7. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A

B. TYPE OF WELL: OIL ☐ GAS ☒ OTHER _____ SINGLE ZONE ☐ MULTIPLE ZONE ☒

8. UNIT or CA AGREEMENT NAME: N/A

2. NAME OF OPERATOR: Pioneer Natural Resources USA, Inc.

9. WELL NAME and NUMBER: PINE SPR FED #12-28-14-22

3. ADDRESS OF OPERATOR: 1401 - 17th Street, Suite 1200, Denver, CO 80202

PHONE NUMBER: 303/298-8100

10. FIELD AND POOL, OR WILDCAT: ~~Wildcat~~ undesignated

4. LOCATION OF WELL (FOOTAGES)

AT SURFACE: 631784 X 4381253Y 39.572750 2020' FNL and 807' FWL

AT PROPOSED PRODUCING ZONE: SW NW -109.465725

11. QTR/QTR, SECTION, TOWNSHIP, RANGE MERIDIAN: Sec. 28, T14S-R22E

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE: Approximately 48.5 miles Southeast of Ouray, UT

12. COUNTY: Uintah

13. STATE: UT

15. DISTANCE TO NEAREST PROPERTY OR LEASE LINE (FEET)	16. NUMBER OF ACRES IN LEASE:	17. NUMBER OF ACRES ASSIGNED TO THIS WELL:
Approx. 624'	1751.68	40 Acres
18. DISTANCE TO NEAREST WELL (DRILLING, COMPLETED, OR APPLIED FOR) ON THIS LEASE (FEET):	**19. PROPOSED DEPTH:**	**20. BOND DESCRIPTION:**
Approx. 4300'	10,900'	Nationwide Bond No. MTB-000041
21. ELEVATIONS (SHOW WHETHER DF, RT, GR, ETC.):	**22. APPROXIMATE DATE WORK WILL START:**	**23. ESTIMATED DURATION:**
6424' GL	ASAP	24 days

24. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	CASING SIZE, GRADE, AND WEIGHT PER FOOT	SETTING DEPTH	CEMENT TYPE, QUANTITY, YIELD, AND SLURRY WEIGHT
14-3/4"	10-3/4", J-55, 40.5#	350'	280 sxs Class "G" @ 15.8 PPG, 1.15 cuft/sx yield
9-7/8"	7-5/8", N-80, 29.7#	5,600'	390 sxs Halliburton Hi-Fill @ 11.0 PPG, 3.84 cuft/sx yield + 140 sxs 50/50 POZ @ 14.5 PPG, 1.16 cuft/sx yield.
6-3/4"	5-1/2", N-80, 17#	10,900'	430 sxs 50/50 POZ, 0.2% Halad-766 @ 14.3 PPG, 1.47 cuft/sx yield.

25. ATTACHMENTS

VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES:

☑ WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER
☑ EVIDENCE OF DIVISION OF WATER RIGHTS APPROVAL FOR USE OF WATER
☑ COMPLETE DRILLING PLAN
☐ FORM 5, IF OPERATOR IS PERSON OR COMPANY OTHER THAN THE LEASE OWNER

AGENT: PermitCo Inc., 14421 County Road 10, Fort Lupton, CO 80621 AGENT'S PHONE NO.: 303/857-9999

NAME (PLEASE PRINT) Venessa Langmacher TITLE Agent for Pioneer Natural Resources USA, Inc.

SIGNATURE Venessa Langmacher DATE November 16, 2007

(This space for State use only)

API NUMBER ASSIGNED: 43-047-39819

Approved by the Utah Division of Oil, Gas and Mining

Date: 11-27-07 (See Instructions on Reverse Side)

By: [signature]

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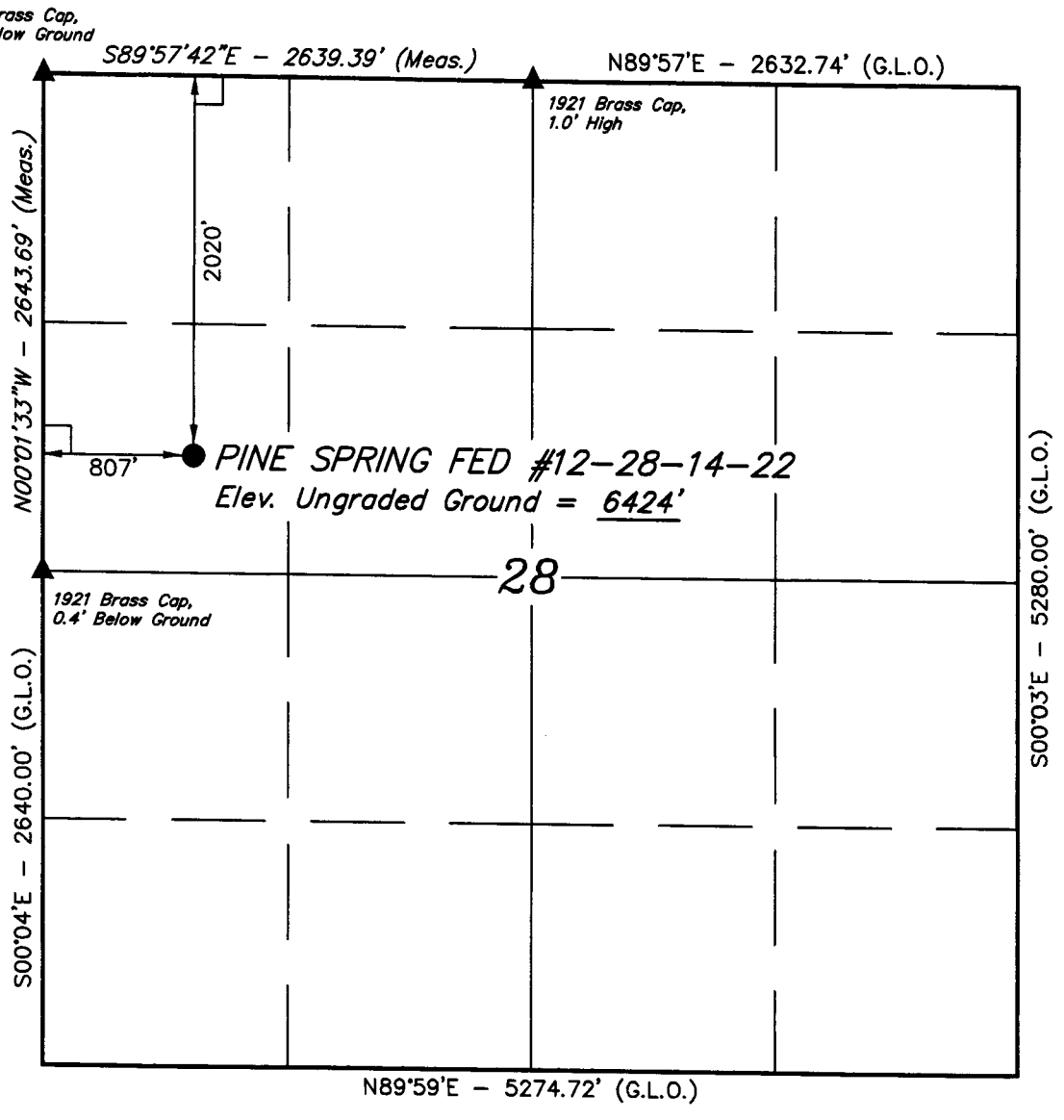
NOV 19 2007
DIV. OF OIL, GAS & MINING

(11/2001) **Federal Approval of this Action is Necessary**

T14S, R22E, S.L.B.&M.



LEGEND:

└ = 90° SYMBOL

● = PROPOSED WELL HEAD.

▲ = SECTION CORNERS LOCATED.

(AUTONOMOUS NAD 83)
LATITUDE = 39°34'21.86" (39.572739)
LONGITUDE = 109°27'59.22" (109.466450)
(AUTONOMOUS NAD 27)
LATITUDE = 39°34'21.98" (39.572772)
LONGITUDE = 109°27'56.77" (109.465769)

PIONEER NATURAL RESOURCES USA, INC.

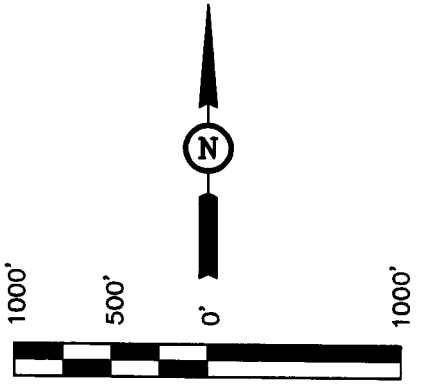
Well location, PINE SPRING FED #12-28-14-22, located as shown in the SW 1/4 NW 1/4 of Section 28, T14S, R22E, S.L.B.&M., Uintah County, Utah.

BASIS OF ELEVATION

SPOT ELEVATION ALONG A JEEP TRAIL LOCATED IN THE NE 1/4 OF SECTION 25, T14S, R22E, S.L.B.&M. TAKEN FROM THE PINE SPRING CANYON QUADRANGLE, UTAH, UINTAH COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 7172 FEET.

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



SCALE

CERTIFICATE

THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR
REGISTRATION NO. 161319
STATE OF UTAH

UINTAH ENGINEERING & LAND SURVEYING
85 SOUTH 200 EAST - VERNAL, UTAH 84078
(435) 789-1017

SCALE 1" = 1000'	DATE SURVEYED: 11-11-06	DATE DRAWN: 11-14-06
PARTY N.H. G.S. S.L.	REFERENCES G.L.O. PLAT	
WEATHER COOL	FILE PIONEER NATURAL RESOURCES USA, INC.	

ONSHORE OIL & GAS ORDER NO. 1
Approval of Operations on Onshore
Federal and Indian Oil and Gas Leases

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Order No. 1, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

1. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS

Formation	*Depth*	*Subsea*
Mesa Verde	2,820'	+3,627'
Castlegate	4,821'	+1,626'
Mancos B	5,607'	+840'
Dakota-Cedar Mt	8,739'	-2,292'
Entrada	9,077'	-2,630'
Wingate	9,537'	-3,090'
Chinle	10,197'	-3,750'
DTD	10,350'	-3,903'
TD	10,900'	-4,453'

2. ESTIMATED DEPTH OF ANTICIPATED WATER, OIL, GAS OR MINERAL FORMATIONS:

Substance	*Formation*	*Depth*
Gas	Entrada	9,077'
Gas	Wingate	9,537'

All fresh water prospectively valuable minerals encountered during drilling, will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.

3. PRESSURE CONTROL EQUIPMENT

Pioneer Natural Resources USA, Inc.'s minimum specifications for pressure control equipment are as follows:

Ram Type: 11" Hydraulic double with annular and rotating head, 5000 psi w.p.

Ram type preventers and associated equipment shall be tested to approved stack working pressure if isolated by test plug or to 70 percent of internal yield pressure of casing. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer. If a test plug is utilized, no bleed-off pressure is acceptable. For a test not utilizing a test plug, if a decline in pressure of more than 10 percent in 30 minutes occurs, the test shall be considered to have failed. Valve on casing head below test plug shall be open during test of BOP stack.

Annular type preventers (if used) shall be tested to 50 percent of rated working pressure. Pressure shall be maintained at least 10 minutes or until provisions of test are met, whichever is longer.

As a minimum, the above test shall be performed:

a. when initially installed;
b. whenever any seal subject to test pressure is broken
c. following related repairs; and
d. at 30-day intervals

Valves shall be tested from working pressure side during BOPE tests with all down stream valves open.

When testing the kill line valve(s) the check valve shall be held open or the ball removed.

Annular preventers shall be functionally operated at least weekly.

Pipe and blind rams shall be activated each trip, however, this function need not be performed more than once a day.

A BOPE pit level drill shall be conducted weekly for each drilling crew.

Pressure tests shall apply to all related well control equipment.

All of the above described tests and/or drills shall be recorded in the drilling log.

BOP systems shall be consistent with API RP53. Pressure tests will be conducted before drilling out from under casing strings which have been set and cemented in place. Blowout preventer controls will be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned. Preventers will be inspected and operated at least daily to ensure good mechanical working order, and this inspection will be recorded on the daily drilling report. Preventers will be pressure tested before drilling casing cement plugs.

The District Office should be notified, with sufficient lead time, in order to have the BLM representative on location during pressure testing.

a. The size and rating of the BOP stack is shown on the attached diagram. Although a rig has not been chosen to drill this well, most of the equipment for this depth of hole in the area use a 11", 5000 psi working pressure blowout preventor.

b. A choke line and a kill line are to be properly installed. The kill line is not to be used as a fill-up line.

c. The accumulator system shall have a pressure capacity to provide for repeated operation of hydraulic preventers.

d. Drill string safety valve(s), to fit all tools in the drill string, are to be maintained on the rig floor while drilling operations are in progress.

4. PROPOSED CASING AND CEMENTING PROGRAM:

a. The proposed casing and cementing program shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. Determination of casing setting depth shall be based on all relevant factors, including; presence/absence of hydrocarbons; fracture gradients; usable water zones; formation pressures; lost circulation zones; other minerals; or other unusual characteristics. All indications of usable water shall be reported.

b. Casing design shall assume formation pressure gradients of 0.44 to 0.50 psi per foot for exploratory wells (lacking better data).

c. Casing design shall assume fracture gradients from 0.70 to 1.00 psi per foot for exploratory wells (lacking better data)

d. Casing collars shall have a minimum clearance of 0.422 inches of all sides in the hole/casing annulus, with recognition that variances can be granted for justified exceptions.

e. All waiting on cement times shall be adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

f. All casing except the conductor casing, shall be new or reconditioned and tested used casing that meets or exceeds API standards for new casing.

g. The surface casing shall be cemented back to surface either during the primary cement job or by remedial cementing.

h. All indications of usable water shall be reported to the authorized officer prior to running the next string of casing or before plugging orders are requested, whichever occurs first.

i. Three centralizers will be run on the bottom three joints of surface casing with a minimum of one centralizer per joint starting with the shoe joint.

j. Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a suitable preflush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.

k. All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or 1500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.

l. On all exploratory wells, and on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

m. The proposed casing program will be as follows:

Purpose	*Depth*	*Hole Size*	*O.D.*	*Weight*	*Grade*	*Type*	*New/Used*
Surface	0-350'	14-3/4"	10-3/4"	40.5#	J-55	STC	New
Intermediate	0'-5,600'	9-7/8"	7-5/8"	29.7#	N-80	LTC	New
Production	0'-10,900'	6-3/4"	5-1/2"	17#	N-80	LTC	New

n. Casing design subject to revision based on geologic conditions encountered.

o. The cement program will be as follows:

Surface	***Type and Amount***
TOC @Surface	280 sxs Class "G", 2% $CACl_2$, 1/4 #/sx Flocele @ 15.8 PPG, 1.15 cuft/sk yield.
Production	***Type and Amount***
TOC @ 150'	Lead: 390 sxs Halliburton Hi-Fill @ 11.0 PPG, 3.84 cuft/sx yield. Tail: 140 sxs 50/50 POZ, 0.3% Halad-322 @ 14.5 PPG, 1.16 cuft/sx yield.
Production	***Type and Amount***
TOC @ 5400'	430 sxs 50/50 POZ, 0.2% Halad-766, 5 lb/sx Silicalite Compacted, 20% SSA-1, 0.1% Versaset @ 14.3 PPG, 1.47 cuft/sx yield.

p. Anticipated cement tops will be reported as to depth; not the expected number of sacks of cement to be used. The District Office should be notified, with sufficient lead time, in order to have a BLM representative on location while running all casing strings and cementing.

q. After cementing but before commencing any test, the casing string shall stand cemented until the cement has reached a compressive strength of at least 500 psi at the shoe. WOC time shall be recorded in the driller's log.

r. The following reports shall be filed with the District Manager within 30 days after the work is completed.

1. Progress reports, Form 3160-5 (formerly 9-331) "Sundry Notices and Reports on Wells", must include complete information concerning:

a. Setting of each string of casing, showing the size, grade, weight of casing set, hole size, setting depth, amounts and type of cement used, whether cement circulated or the top of the cement behind the casing, depth of cementing tools used, casing test method and results, and the date work was done. Show the spud date on the first reports submitted.

b. Temperature or bond logs must be submitted for each well where the casing cement was not circulated to the surface.

s. Auxiliary equipment to be used is as follows:

1. Kelly cock

2. No bit float is deemed necessary.

3. A sub with a full opening valve.

5. MUD PROGRAM

a. The proposed circulating mediums to be employed in drilling are as follows:

Interval	*Mud Type*	*Mud Wt.*	*Visc.*	*F/L*	*pH*
0' - 350'	Air- Air Mist	- - -	- - -	- - -	- - -
350' - 5,600'	Water & Gel	8.6 - 8.8	38 - 44	30 cc or less	8 - 10
5,600' - 10,900'	Aerated Fluid	7.0 - 8.0	34 -38	15 cc or less	8-10

There will be sufficient mud on location to control a blowout should one occur.

A mud test shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, static filtration loss, and Ph.

b. Mud monitoring equipment to be used is as follows:

1. Periodic checks will be made each tour of the mud system. The mud level will be checked visually.

c. No chromate additives will be used in the mud system on Federal and/or Indian lands without prior BLM approval to ensure adequate protection of fresh water aquifers.

d. No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

e. The use of materials under BLM jurisdiction will conform to 43 CFR 3610.2-3.

6. EVALUATION PROGRAM

The anticipated type and amount of testing, logging and coring are as follows:

a. Drill stem tests will be run if necessary. If DST's are run, the following requirements will be adhered to:

Initial opening of drill stem test tools shall be restricted to daylight hours unless specific approval to start during other hours is obtained from the authorized officer. However, DST's may be allowed to continue at night if the test was initiated during daylight hours and the rate of flow is stabilized and if adequate lighting is available (i.e. lighting which is adequate for visibility and vapor-proof for safe operations). Packers can be released, but tripping shall not begin before daylight, unless prior approval is obtained from the authorized officer. Closed chamber DSTs may be accomplished day or night.

A DST that flows to the surface with evidence of hydrocarbons shall be either reversed out of the testing string under controlled surface conditions. This would involve provided some means for reverse circulation.

Separation equipment required for the anticipated recovery shall be properly installed before a test starts.

All engines within 100 feet of the wellbore that are required to "run" during the test shall have spark arresters or water cooled exhausts.

b. The logging program will consist of a Triple Combo to be run from Surface Casing to TD.

c. No cores are anticipated.

d. Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (Form 3160-4) will be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3164. Two copies of all logs, core descriptions, core analyses, well-test data, geologic summaries, sample description, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, will be filed with form 3160-4. Samples (cutting, fluids, and/or gases0 will be submitted when requested by the authorized officer (AO).

e. The anticipated completion program will be based upon drilling shows.

f. Daily drilling and completion progress reports shall be submitted to the BLM in Vernal on a weekly basis.

7. ABNORMAL TEMPERATURES OR PRESSURES

a. The expected bottom hole pressure is 4534 psi. The maximum bottom hole temperature anticipated is 221 degrees F.

b. No hydrogen sulfide gas is anticipated. No abnormal pressures are anticipated.

8. ANTICIPATED STARTING DATES AND NOTIFICATION OF OPERATIONS

a. Drilling is planned to commence upon approval of this application.

b. It is anticipated that the drilling of this well will take approximately 24 days.

c. The BLM in Vernal, Utah shall be notified of the anticipated date of location construction commencement and of anticipated spud date.

d. No location will be constructed or moved, no well will be plugged, and no drilling or workover equipment will be removed from a well to be placed in a suspended status without prior approval of the AO. If operations are to be suspended, prior approval of the AO will be obtained and notification given before resumption of operations.

e. The spud date will be reported orally to the AO within 48 hours after spudding. If the spudding occurs on a weekend or holiday, the report will be submitted on the following regular work day. The oral report will be followed up with a Sundry Notice.

f. In accordance with Onshore Oil and Gas Order No. 1, this well will be reported on Form 3160-6 "Monthly Report of Operations", starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report will be filed with the Vernal BLM District Office, 170 South 500 East, Vernal, UT 84078.

g. Immediate Report: Spills, blowouts, fires, leaks, accidents, or any other unusual occurrences shall be promptly reported in accordance with the requirements of NTL-3A or its revision.

h. If a replacement rig is contemplated for completion operations, a "Sundry Notice" Form 3160-5 to that effect will be filed, for prior approval of the AO, and all conditions of this approved plan are applicable during all operations conducted with the replacement rig.

i. Should the well be successfully completed for production, the AO will be notified when the well is placed in a producing status. Such notification will be sent by telegram or other written communications, not later than 5 days following the date on which the well is placed on production.

j. Pursuant to Onshore Order No. 7, with the approval of the District Engineer, produced water may be temporarily disposed of into unlined pits for a period of up to 90 days. During the period so authorized, an application for approval of the permanent disposal method, along with the required water analysis and other information, must be submitted to the District Engineer.

k. Pursuant to NTL-4A, lessees or operators are authorized to vent/flare gas during initial well evaluation tests, not exceeding a period of 30 days or the production of 50 MMCF of gas, whichever occurs first. An application must be filed with the District Engineer and approval received, for any venting/flaring of gas beyond the initial 30 day or authorized test period.

l. A schematic facilities diagram as required by 43 CFR 3162.7-5 (b.9.d.), shall be submitted to the appropriate District Office within sixty (60) days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3162.7-5 (b.4.).

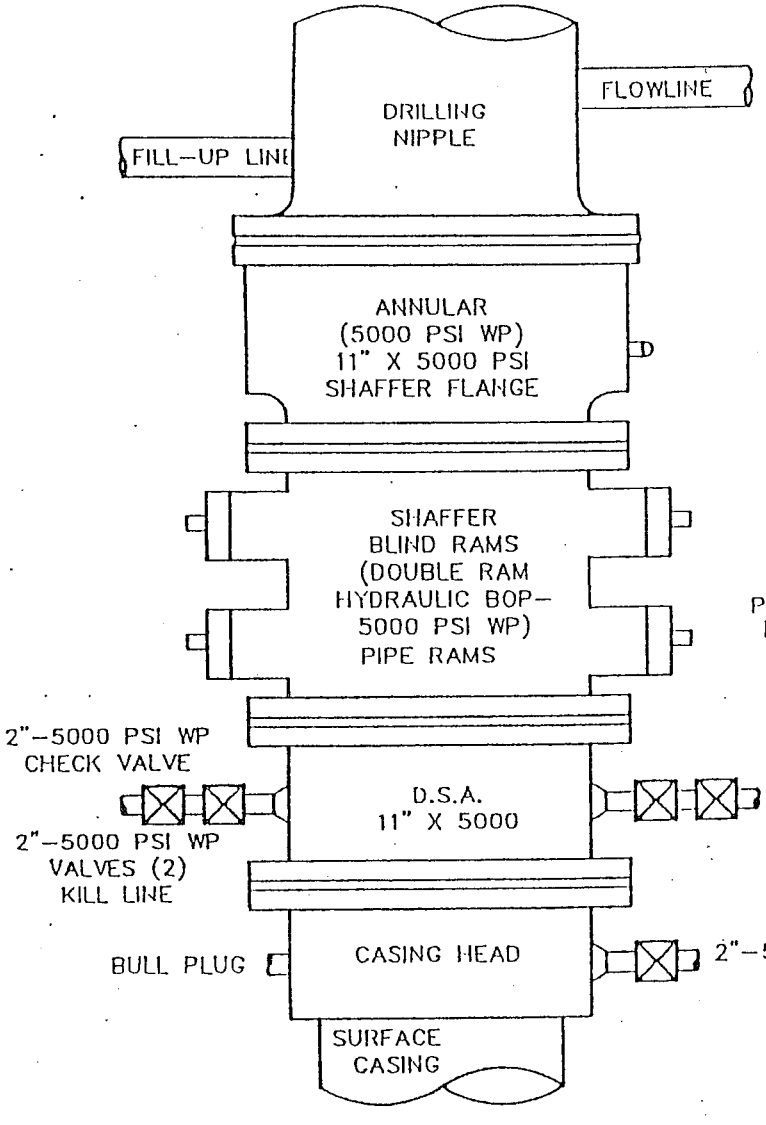
m. A first production conference will be scheduled within 15 days after receipt of the first production notice.

n. No well abandonment operations will be commenced without the prior approval of the AO. In the case of newly drilled dry holes or failures, and in emergency situations, oral approval will be obtained from the SO. A "Subsequent Report of Abandonment" Form 3160-5, will be filed with the AO within 30 days following completion of the well for abandonment. This report will indicate where plugs were placed and the current status of surface restoration. Final abandonment will not be approved until the surface reclamation work required by the approved APD or approved abandonment notice has been completed to the satisfaction of the AO or his representative, or the appropriate Surface Managing Agency.

o. Pursuant to Onshore Oil and Gas Order No. 1, lessees and operators have the responsibility to see that their exploration, development, production, and construction operations are conducted in a manner which conforms with applicable Federal laws and regulations and with State and local laws and regulations to the extent that such State and local laws are applicable to operations on Federal or Indian lands.

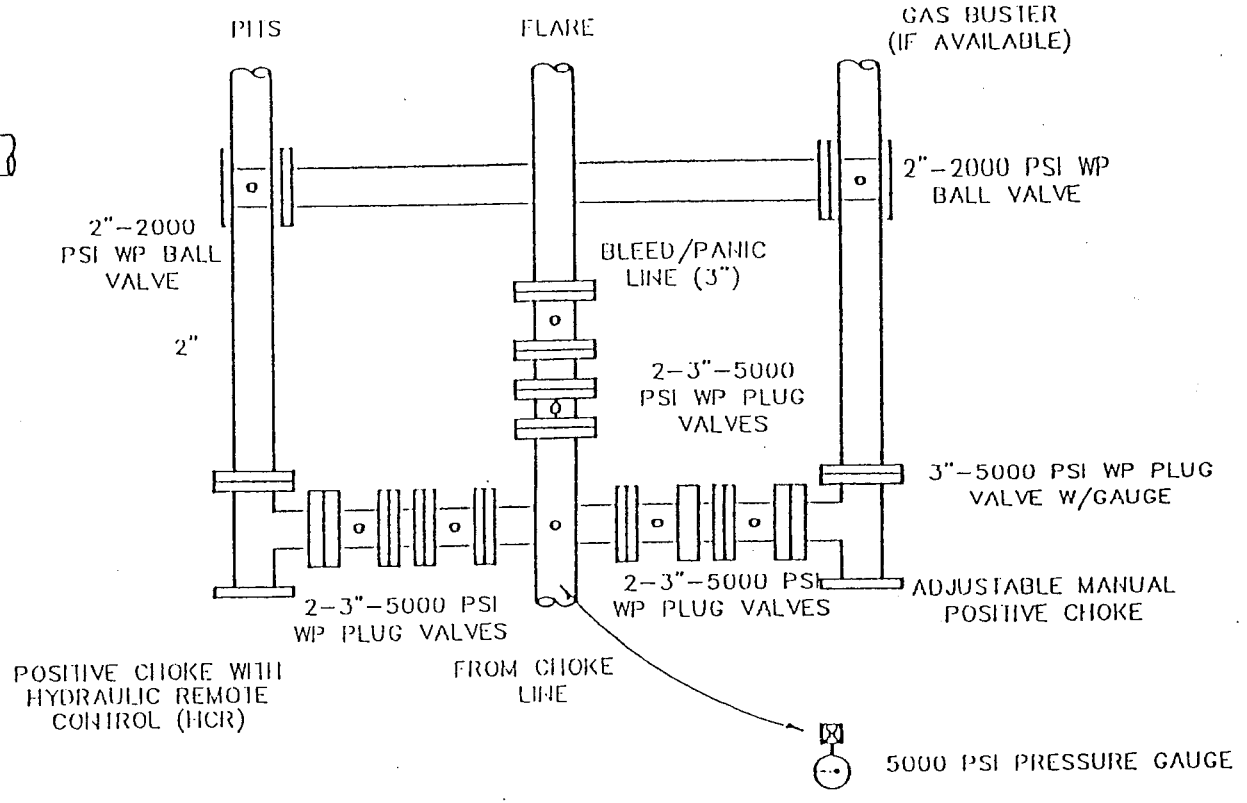
Bureau of Land Management 170 South 500 East Vernal, Utah 84078		
Phone: 435/781-4400	After Hours:	Fax: 435/781-4410
Matt Baker	Petroleum Engineer	435/828-4470
Michael Lee	Petroleum Engineer	435/828-7875

BOP SCHEMATIC
5000 PSI WORKING PRESSURE



3"-5000 PSI WP VALVE (HCR)
3"-5000 PSI WP VALVE
3"-5000 PSI AUTOMATIC CHOKE
CHOKE LINE (I.D.)

PLAN VIEW CHOKE MANIFOLD



THE HYDRAULIC CLOSING UNIT WILL BE LOCATED MORE THAN 30' FROM THE WELLHEAD. CHOKE AND BLEED/PANIC LINES WILL GO TO THE PIT AND FLARE. ALL CONNECTIONS IN CHOKE LINES AND MANIFOLD WILL BE FLANGED OR WELDED. ALL FLANGES SHOULD BE RING JOINT GASKET TYPE. ALL TURNS IN LINES SHALL BE CONSTRUCTED USING TARGETING 90° TEES OR ELLS. ALL LINES SHALL BE ANCHORED.

ONSHORE OIL & GAS ORDER NO. 1
NOTIFICATION REQUIREMENTS

Location Construction	-	forty-eight (48) hours prior to construction of location and access roads.
Location Completion	-	prior to moving on the drilling rig.
Spud Notice	-	at least twenty-four (24) hours prior to spudding the well.
Casing String and Cementing	-	twenty-four (24) hours prior to running casing and cementing all casing strings.
BOP and Related Equipment Tests	-	twenty-four (24) hours prior to initiating pressure tests.
First Production Notice	-	within five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days.

The onsite inspection was conducted on Thursday, November 16, 2006 at approximately 10:35 a.m. Weather conditions were cool and cloudy. The following individuals were in attendance:

Holly Villa	Natural Resource Specialist	Bureau of Land Management
Brandon McDonald	Wildlife Biologist	Bureau of Land Management
Dan Emmett	Intern	Bureau of Land Management
Danny Rasmussen	Surveyor	Uintah Eng. & Land Surveying
John Bruch	Survey Hand	Uintah Eng. & Land Surveying
Randy Smith	Permitting Agent	Permitco Inc.
Steve Schreck	Regulatory Compliance Supervisor	Pioneer Natural Resources USA, Inc.

1. EXISTING ROADS

a. The proposed well site is located approximately 48.5 miles southeast of Ouray, Utah.

b. Directions to the location from Ouray, Utah are as follows:

Proceed Southeasterly on the Seep Ridge Road for approximately 42.8 miles. Turn right and proceed southwesterly 2.6 miles. Turn right and proceed northwesterly 3.1 miles. Turn right onto the proposed access and proceed north 50' until reaching the proposed location.

c. For location of access roads within a 2-Mile radius, see Maps A & B.

d. Improvement to existing main roads will not be required.

e. All existing roads will be maintained and kept in good repair during all drilling and completion operations associated with this well.

f. Existing roads and newly constructed roads on surface under the jurisdiction of any Surface Managing Agency shall be maintained in accordance with the standards of the SMA.

2. PLANNED ACCESS ROADS

a. There will be approximately 50' of new access to be constructed. In addition, the last 3.1 miles of Class D Road may require minor maintenance.

b. The maximum grade of the proposed construction will be approximately 2%.

c. No low water crossings will be necessary.

d. No culverts will be necessary.

e. The use of surfacing material is not anticipated, however it may be necessary depending on weather conditions.

f. No cattle guards will be necessary.

g. Surface disturbance and vehicular travel will be limited to the approved location and approved access route. Any additional area needed will be approved in advance.

h. Access roads and surface disturbing activities will conform to standards outlined in the Bureau of Land Management and Forest Service publication: Surface Operating Standards for Oil and Gas Exploration and Development, (1989).

i. The road will be constructed/upgraded to meet the standards of the anticipated traffic flow and all weather road requirements. Construction/upgrading shall include ditching, draining, graveling, crowing and capping the roadbed as necessary to provide a well constructed safe road. Prior to upgrading, the road shall be cleared of any snow cover and allowed to dry completely. Traveling off the 30 foot right-of-way will not be allowed. Road drainage crossings shall be of the typical dry creek drainage crossing type. Crossings shall be designed so they will not cause siltation or accumulation of debris in the drainage crossing nor shall the drainages be blocked by the roadbed. Erosion of drainage ditches by runoff water shall be prevented by diverting water off at frequent intervals by means of cutouts. Upgrading shall not be allowed during muddy conditions. Should mud holes develop, they shall be filled in and detours around them avoided.

j. No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the drilling of this well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling of this well.

k. No road right of way is required since all roads are maintained by the County or are Class D Roads.

3. LOCATION OF EXISTING WELLS WITHIN A 1-MILE RADIUS OF THE PROPOSED LOCATION.

(See Map "C")

a. Water wells - none

b. Injection wells - none

c. Producing wells - two

d. Drilling wells - none

e. Shut-in wells - nonw

f. Temporarily abandoned wells - none

g. Disposal wells -none

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h. Abandoned wells - none

i. Dry Holes - none

4. LOCATION OF TANK BATTERIES AND PRODUCTION FACILITIES.

a. All permanent structures (onsite for six months or longer) constructed or installed (including oil well pump jacks) will be painted Olive Black. All facilities will be painted within six months of installation. Facilities required to comply with the Occupational Safety and Health Act (OSHA) will be excluded.

b. If storage facilities/tank batteries are constructed on this lease, the facility/battery or the well pad shall surrounded by a containment dike of sufficient capacity to contain at a minimum, the entire contents of the largest tank within the facility/battery, unless more stringent protective requirements are deemed necessary by the authorized officer.

c. If production is established, a production facility diagram will be submitted via sundry.

d. All loading lines will be placed inside the berm surrounding the tank battery.

e. Gas meter runs for each well will be located within 500 feet of the wellhead. The gas flow line will be buried or anchored down from the wellhead to the separator. Meter runs will be housed and/or fenced.

f. The oil and gas measurement facilities will be installed on the well location. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The AO will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports will be submitted to the Vernal Field Office. All meter measurement facilities will conform with Onshore Oil and Gas Order No. 4 for liquid hydrocarbons and Onshore Oil and Gas Order No. 5 for natural gas measurement.

g. If at any time the facilities located on public land and authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change), BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental or other financial obligation as determined by the authorized officer.

h. Any necessary pits will be properly fenced to prevent any wildlife entry.

i. All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to.

j. All off-lease storage, off-lease measurement, or commingling on-lease or off-lease will have prior written approval from the District Manager.

k. All access roads will be maintained as necessary to prevent erosion and accommodate year-round traffic.

l. The road will be maintained in a safe useable condition.

m. Pipelines will follow the route shown on Map D. Pipeline right of way is needed for the portion of pipeline located outside of the lease boundary. We are requesting that this APD be used as our application for pipeline right of way. Please notify us once a category determination has been made so that we may send the necessary filing fees.

5. LOCATION AND TYPE OF WATER SUPPLY

a. The proposed water source will be from a water well located in the SW SE, Section 32, T4S - R3E, Ouray, UT, Permit No. 43-8496

b. Water will be hauled by Dalbo, Inc. to the location over the access roads shown on Maps A and B.

c. No water well will be drilled on this lease.

6. SOURCE OF CONSTRUCTION MATERIAL

a. Surface and subsoil materials in the immediate area will be utilized.

b. Any gravel used will be obtained from a commercial source.

c. The use of materials under BLM jurisdiction will conform with 43 CFR 3610.2.3. Construction material will not be located on lease.

d. No construction materials will be removed from Federal land.

7. METHODS OF HANDLING WASTE DISPOSAL

a. The reserve pit will be constructed so as not to leak, break, or allow discharge.

b. At the request of the BLM, the reserve pit will be lined with a 12 mil liner. If fractured rock is encountered, the pit will be first lined with a felt liner to cover any rocks. The liner will overlap the pit walls and be covered with dirt and/or rocks to hold it in place. No trash, scrap pipe, etc., that could puncture the liner will be disposed of in the pit. More stringent protective requirements may be deemed necessary by the A.O.

c. Burning will not be allowed. All trash will be contained in a trash cage and its contents removed at the end of drilling operations and hauled to an approved disposal sight.

d. After first production, produced waste water will be confined to a unlined pit or storage tank for a period not to exceed ninety (90) days. During the 90-day period, in accordance with Onshore Order No. 7, an application for approval of a permanent disposal method and location, along with the required water analysis, will be submitted for the AO's approval. Failure to file an application within the time allowed will be considered an incident of noncompliance.

e. Drill cuttings are to be contained and buried in the reserve pit.

f. Any salts and/or chemicals which are an integral part of the drilling system will be disposed of in the same manner as the drilling fluid.

g. A chemical porta-toilet will be furnished with the drilling rig.

h. The produced fluids will be produced into a test tank until such time as construction of production facilities is completed. Any spills of oil, gas salt water or other produced fluids will be cleaned up and removed.

8. ANCILLARY FACILITIES

There are no airstrips, camps, or other facilities planned at this time.

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9. WELL SITE LAYOUT

a. The operator or his/her contractor shall contact the BLM Office at 435/781-4400 forty-eight (48) hours prior to construction activities.

b. The reserve pit will be located on the northeast side of the location.

c. The flare pit will be located on the east side of the reserve pit, a minimum of 100 feet from the well head and 20 feet from the reserve pit fence.

d. The stockpiled topsoil (first six inches) will be stored on the northwest side of the location, between Corners 2 and 4 near the wellpad and on the southeast side between Corners D and 6. Topsoil along the access route will be wind rowed on the uphill side.

e. Access to the well pad will be from the south as shown on the Pit & Pad Layout.

f. See Location Layout for orientation of rig, cross section of drill pad and cuts and fills.

g. The location of mud tanks; reserve pit, trash cage; pipe racks; living facilities and soil stockpiles will be shown on the Location Layout.

h. All pits will be fenced according to the following minimum standards:

1. 39 inch net wire shall be used with at least one strand or barbed wire on top of the net wire (barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence).

2. The net wire shall be no more than 2-inches above the ground. The barbed wire shall be 3-inches above the net wire. Total height of the fence shall be at least 42-inches.

3. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

4. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than 16 feet.

5. All wire shall be stretched, by using a stretching device, before it is attached to the corner posts.

i. The reserve pit fencing will be on three sides during drilling operations and on the fourth side when the rig moves off the location. Pits will be fenced and maintained until cleanup.

10. PLANS FOR RESTORATION OF SURFACE

Producing Location

a. Immediately upon well completion, the location and surrounding area will be cleared of all unused tubing, equipment, debris, materials, trash and junk not required for production.

b. Immediately upon well completion, any hydrocarbons on the pit shall be removed in accordance with 43 CFR 3162.7-1.

c. If a plastic nylon reinforced liner is used it shall be torn and perforated before backfilling of the reserve pit.

d. The reserve pit and that portion of the location not needed for production facilities or operations will be recontoured to the approximate natural contours. The reserve pit will be reclaimed within 120 days from the date of well completion. Before any dirt work takes place, the reserve pit must have all fluids and hydrocarbons removed and all cans, barrels, pipe, etc., will be removed.

e. Reclamation of unused disturbed areas on the well pad/access road no longer needed for operations, such as cut slopes, and fill areas will be accomplished by grading, leveling and seeding as recommended by the Authorized Officer. A seed mixture has been specified by the Bureau of Land Management and is as follows:

Species	#'s PLS/ Acre
Needle & Thread Grass	4
Crested Wheatgrass	4
Indian Rice Grass	4
Four Sing Salt Bush	4
Blue Gamma	3

Seeding will be performed immediately after the location has been reclaimed and the pit has been backfilled, regardless of the time of year. Seed will be broadcast and walked in with a dozer.

f. The topsoil stockpile will be seeded as soon as the location has been constructed with the same recommended seed mix. The seed will be walked in with a cat.

Dry Hole

h. At such time as the well is plugged and abandoned, the operator shall submit a subsequent report of abandonment and BLM will attach the appropriate surface rehabilitation conditions of approval.

11. SURFACE OWNERSHIP

Access Roads - The majority of the access roads are maintained by the County Road Department or the Bureau of Land Management.

Well pad - The well pad is located on lands managed by the BLM.

12. OTHER INFORMATION

a. A Class III archeological survey has been conducted by SWCA. A copy of this report is attached.

b. The operator is responsible for informing all persons in the areas who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

-whether the materials appear eligible for the National Register of Historic Places;

-the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and

-a time frame for the AO to complete and expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that required mitigation has been completed, the operator will then be allowed to resume construction.

c. The operator will control noxious weeds along rights-of-way for roads, pipelines, well sites, or other applicable facilities. A list of noxious weeds may be obtained from the BLM, or the appropriate County Extension Office. On BLM administered land it is required that a Pesticide Use Proposal shall be submitted, and given approval, prior to the application of herbicides or other pesticides or possible hazardous chemicals.

d. Drilling rigs and/or equipment used during drilling operations on this wellsite will not be stacked or stored on Federal Lands after the conclusion of drilling operations or at any other time without BLM authorization. However, if BLM authorization is obtained, it is only a temporary measure.

e. All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved plan of operations, and any applicable Notice to Lessees. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished the field representative to insure compliance.

f. A complete copy of the approved APD shall be on location during construction of the location and drilling activities.

g. There will be no deviation from the proposed drilling and/or work over program without prior approval from the AO. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended or abandoned will be identified in accordance with 43 CFR 3162.

h. "Sundry Notice and Report on Wells" (Form 3160-5) will be filed for approval for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.

i. This permit will be valid for a period of two years from the date of approval. An extension period may be granted, if requested, prior to the expiration of the original approval period. After permit termination, a new application will be filed for approval for any future operations.

j. The operator or his contractor shall contact the BLM Offices at 435/781-4400 48 hours prior to construction activities.

k. The BLM Office shall be notified upon site completion prior to moving on the drilling rig.

13. LESSEE'S OR OPERATOR'S REPRESENTATIVE AND CERTIFICATION

Permit Matters

PERMITCO INC.
14421 County Road 10
Ft. Lupton, CO 80621
303/857-9999 (O)
303/857-0577 (F)
Lisa Smith

Drilling & Completion Matters

Pioneer Natural Resources USA, Inc.
1401 - 17th Street, Suite 1200
Denver, CO 80202
303/675-2782 (O)
303/294-1275 (F)
Stephen Schreck - Regulatory Compliance Supervisor

PIPELINE INFORMATION
PINE SPR FED #12-28-14-22

1. The type of pipeline is a single well flow line.
2. The outside diameter (O.D.) of all will be 4 inches.
3. The anticipated production through the line is approximately 2000 MCF per day.
4. The anticipated maximum test pressure is 1000 psi.
5. The anticipated operating pressure is 100-200 psi.
6. The type of pipe is steel.
7. The method of coupling is welded.
8. The pipeline will be buried.
9. There are no other pipelines to be associated in same right of way.
10. There will be other objects to be associated in the same right of way. (Risers, Pig Launchers Pig Traps, meters and other appurtenances as required.)
11. The total length of pipeline is approximately 7,065 feet - see Map D.
12. The line will be buried adjacent to the access road, as shown on Map D. Where possible, the pipeline follows proposed access roads.
13. The construction width for total surface disturbing activities is 30 feet.
14. The estimated total acreage involving all surface disturbing activities is 4.87 acres.
15. Any surface disturbance created as a result of the pipeline construction will be reclaimed utilizing the reclamation procedures and seed mixture specified by the Bureau of Land Management and the surface owner.
16. The line will be tested with gas pressure to 1000 psi.

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Pioneer Natural Resources USA, Inc.
PINE SPR FED #12-28-14-22
2020' FNL and 807' FWL
SW NW Section 28, T14S - R22E
Uintah County, UT

CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge, of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements. Executed this 17th day of May, 2007.

Venessa Langmacher

Venessa Langmacher

Agent Pioneer Natural Resources USA, Inc.
Title

14421 County Road 10, Fort Lupton, CO 80621
Address

303/857-9999
Telephone

LSPermitco@aol.com
E-mail

FEDERAL STIPULATIONS AND TIMING RESTRICTIONS

Any federal stipulations will be attached as a condition of approval.

Class III Cultural Resource Inventory of the Trapp Spring Federal 43-21-14-23, Pine Spring Federal 12-28-14-22, Trapp Spring Federal 11-24-14-23, and Main Canyon State 24-21-15-23 Well Pads in Uintah County, Utah

Prepared for

Pioneer Natural Resources USA, Inc.

Prepared by

SWCA Environmental Consultants

May 9, 2007

Class III Cultural Resource Inventory of the Trapp Spring Federal 43-21-14-23, Pine Spring Federal 12-28-14-22, Trapp Spring Federal 11-24-14-23, and Main Canyon State 24-21-15-23 Well Pads in Uintah County, Utah

Submitted to

Pioneer Natural Resources USA, Inc.
1401 17th Street, Suite 1200
Denver, CO 80202

Prepared by

Jason Burkard
Vanesa K. Zietz
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Scott A. Slessman, Principal Investigator

Bureau of Land Management Cultural Resource Use Permit 06UT55126

State of Utah Project Number U-07-ST-0227b, s

SWCA Project No. 12599-222

SWCA Cultural Resource Report 2007-200

May 9, 2007

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Appendix

ABSTRACT

In April 2007, SWCA Environmental Consultants (SWCA) conducted a Class III cultural resource inventory of 2.21 miles (mi) (53.65 acres [ac]) of proposed pipeline, 0.81 mi (19.63 ac) of proposed access roads, 4.93 mi (119.47 ac) of co-located pipeline and access roads, and 40 acres (ac) for four proposed well pads in Uintah County, Utah on behalf of Pioneer Natural Resources USA, Inc. (Pioneer). Pioneer proposes to construct four well pads (Trapp Spring Federal 43-21-14-23, Pine Spring Federal 12-28-14-22, Trapp Spring Federal 11-24-14-23, and Main Canyon State 24-21-15-23), construct pipelines to connect the wells with existing pipelines, and improve access roads on State of Utah lands and public lands administered by the Bureau of Land Management (BLM) Vernal Field Office (VFO).

The project area is located at the southeastern edge of Uintah County, Utah. Located approximately 70 mi south of Vernal, Utah, the proposed project lies within the East Tavaputs Plateau section of the Colorado Plateau (Stokes 1986). The project area is located in Sections 21, 24, 25, 27, 28, 34, 35, and 36 in Township (T) 14 South (S), Range (R) 23 East (E); Sections 20, 21, 28, and 29 in T14S, R22E; and Sections 21, 22, 27, and 28 in T15S, R23E.

During the Class III cultural resource inventory of the proposed well pads, SWCA recorded two isolated occurrences (IOs) (not eligible for the National Register of Historic Places [NRHP]) and one new archaeological site (42UN5808). No previously recorded sites were located within the project area. 42UN5808 consists of a possible historic headstone and is recommended eligible for nomination to the NRHP. This resource lies less than 80 feet from the proposed Main Canyon State 24-21-15-23 well pad. To avoid impacts to the resource, the proposed well pad and associated disturbance should be kept at least 100 ft from the site boundary.

Form UT-8100-3
(December 2000)

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
UTAH STATE OFFICE

Summary Report of Cultural Resources Inspection **State Proj. No: U-07-ST-0227b, s**

1. Report Title: Class III Cultural Resource Inventory of the Trapp Spring Federal 43-21-14-23, Pine Spring Federal 12-28-14-22, Trapp Spring Federal 11-24-14-23, and Main Canyon State 24-21-15-23 Well Pads in Uintah County, Utah

2. Report Date: May 9, 2007

3. Date(s) of Survey: April 11-13, 2007

4. Development Company: Pioneer Natural Resources USA, Inc.

5. Responsible Institution: SWCA Environmental Consultants

6. Responsible Individuals
   Principal Investigator: Scott A. Slessman
   Field Supervisor(s): Mike Retter
   Report Author(s): Jason Burkard, Vanesa Zietz, Karen Reed, Norma K. Crumbley, and Heidi Guy Hays

7. BLM Field Office: Vernal Field Office

8. County(ies): Uintah County

9. Fieldwork Location:
   USGS Map: Pine Springs Canyon, Utah (1966); Seep Canyon, Utah (1966)

   Twn: 14S Range: 23E Section: 21, 24, 25, 27, 28, 34, 35, and 36

   Twn: 14S Range: 22E Section: 20, 21, 28, and 29

   Twn: 15S Range: 23E Section: 21, 22, 27, and 28

10. Record Search:
    Location of Records Searched: Utah Division of State History, BLM Vernal Field Office

    Date of Record Search: March 22, 2007; April 11, 2007

11. Description of Examination Procedures: The area of potential effect (APE) for the project includes a 200-foot (60-meter [m[) right-of-way for the length of the proposed pipelines and access roads, totaling 192.75 acres (ac), and a 10-ac parcel for each well pad, totaling 40 ac. SWCA archaeologists surveyed the APE pipeline/access road corridor using double, 15-m-wide zigzag transects, and the well pad parcels using 15-m-wide zigzag transects.

12. Area Surveyed:

		BLM	STATE
Linear Miles	Intensive:	6.66 mi (160.46 ac)	1.29 mi (32.29 ac)
	Recon/Intuitive:		
Acreage	Intensive:	30	10
	Recon/Intuitive:		

13. Sites Recorded:

		BLM		STATE	
		#	Smithsonian Site Numbers	#	Smithsonian Site Numbers
Revisits (no IMACS form)	NR Eligible	0		0	
	Not Eligible	0		0	
Revisits (updated IMACS)	NR Eligible	0		0	
	Not Eligible	0		0	
New Recordings (IMACS)	NR Eligible	0		1	42UN5808
	Not Eligible	0		0	
	Unevaluated	0		0	

Total Number of Archeological Sites: 1

Historic Structures (USHS Form): 0

Total National Register Eligible Sites: 1

14. Description of Findings:

The Class III cultural resource inventory of the proposed project area of the Trapp Spring Federal 43-21-14-23, Pine Spring Federal 12-28-14-22, Trapp Spring Federal 11-24-14-23, and Main Canyon State 24-21-15-23 Well Pads project recorded two isolated occurrences (IOs) (not eligible for the NRHP) and one new archaeological site (42UN5808). 42UN5808 is recommended eligible for the NRHP.

15. Collection Yes___ No_X____

(If Yes) Curation Facility:
Accession Number(s):

16. Conclusion/Recommendations:

The Class III cultural resource inventory of the Trapp Spring Federal 43-21-14-23, Pine Spring Federal 12-28-14-22, Trapp Spring Federal 11-24-14-23, and Main Canyon State 24-21-15-23 Well Pads project recorded one new archaeological site, and two IOs (recommended as not eligible for the NRHP). 42UN5808 consists of a possible historic headstone and is recommended eligible for nomination to the NRHP. This resource lies less than 80 ft from the proposed Main Canyon State 24-21-15-23 well pad. To avoid impacts to the resource, this well pad should be relocated at least 100 ft from the site.

8100-3 Form

INTRODUCTION

SWCA Environmental Consultants (SWCA) conducted a Class III cultural resource inventory for four proposed well pads in Uintah County, Utah: Trapp Spring Federal 43-21-14-23, Pine Spring Federal 12-28-14-22, Trapp Spring Federal 11-24-14-23, and Main Canyon State 24-21-15-23. The inventory was conducted at the request of Pioneer Natural Resources USA, Inc. (Pioneer), Western Division. The project area is comprised of lands administered by the State of Utah and the Bureau of Land Management (BLM) Vernal Field Office (VFO), and consists of approximately 2.21 miles (mi) of proposed pipeline, 0.81 mi of proposed access roads, 4.93 mi of co-located proposed pipelines and access roads, and four 10-acre (ac) proposed well pads. The inventory was conducted under Utah Division of State History project number U-07-ST-0227b, s. Mike Retter, Phil Hanes, Michelle Delmas, and Katie Dumm conducted the fieldwork in April 2007. Scott Slessman served as principal investigator under BLM Cultural Resource Use Permit number 06UT55126; Heidi Guy Hays served as the project manager and Mike Retter served as the field director. All field notes and photographs are on file at SWCA's Broomfield, Colorado office under project number 12599-222. The BLM VFO is the lead federal agency for this undertaking.

This cultural resource inventory was conducted to attain compliance with federal and state oil and gas mandates, including Section 106 of the National Historic Preservation Act (NHPA) of 1966 (as amended), the Antiquities Act of 1906, and the Archaeological Resources Protection Act of 1979. The objective of this inventory was to locate, document, and evaluate any cultural resources within the area of potential effect (APE) of the proposed project and to provide Pioneer with guidance for cultural resource management, treatment, and potential clearance for construction of the proposed well pads. The APE includes a 200-foot (ft)-wide corridor for the pipelines and access roads plus a 10-ac block area around each well pad.

PROJECT LOCATION

The project area is located in southeastern Uintah County, Utah, approximately 60 mi south of Vernal, Utah (Figure 1). SWCA inventoried a 200-ft right-of-way (ROW) for the entire length of proposed pipelines (2.21 mi), proposed access roads (0.81 mi), and co-located proposed pipelines and access roads (4.93 mi), covering a total of 192.75 ac. SWCA also inventoried a 10-ac parcel for each well pad, totaling an additional 40 ac. The project area is located in Sections 21, 24, 25, 27, 28, 34, 35, and 36 in Township (T) 14 South (S), Range (R) 23 East (E); Sections 20, 21, 28, and 29 in T14S, R22E; and Sections 21, 22, 27, and 28 in T15S, R23E. The project area includes State of Utah lands and BLM-administered lands. State-owned lands include portions of Section 36 in T14S, R23E and Sections 21, 22, 27, and 28 in T15S, R23E. The remainder of the project area lies within public lands administered by the BLM VFO.

Figure 1. Project location map showing surveyed areas for Seep Ridge Pioneer Wells.

DESCRIPTION OF UNDERTAKING

Pioneer proposes to construct four well pads (Trapp Spring Federal 43-21-14-23 [Figure 2], Pine Spring Federal 12-28-14-22 [Figure 3], Trapp Spring Federal 11-24-14-23 [Figure 4], and Main Canyon State 24-21-15-23 [Figure 5]), approximately 2.21 mi of pipeline, 0.81 mi of access roads, and 4.93 mi of co-located pipelines and access roads. The construction phase of the project would involve preparing the ROW by blading and grubbing the ground surface, and trenching for the installation of the pipelines, roads, and well pads.

PROJECT SETTING

This section provides a brief summary of the environmental setting and cultural chronology of the proposed well pads project area. The environmental setting is discussed below, followed in the next section by the cultural chronology. See Spangler (1995) for a detailed synthesis of the environmental setting and cultural chronologies within the Uinta Basin and Tavaputs region.

ENVIRONMENTAL SETTING

Located on the East Tavaputs Plateau, the project area is centered on Seep Ridge and extends into Main Canyon, Trap Canyon, and Seep Canyon. The Book Cliffs, Roan Cliffs, and the Grand Valley are located south of the project area, and the lowlands of the Uinta Basin are located to the north. Desolation Canyon, along the Green River, separates West Tavaputs Plateau from East Tavaputs Plateau. Additional named topographic features in and around the project area are numerous. Seep Ridge, a large northwest/southeast-trending ridge, extends through the project area. Several named ridges extend from Seep Ridge, including Pope Well Ridge and Horse Ridge. Main Canyon is the major drainage in the project area, oriented to the northwest.

The topography consists of several deeply cut canyons, steep ridges, rolling hills, rolling ridge tops, and ephemeral drainages (Figure 6). On the ground, the area is accessible by a few improved and unimproved dirt roads that traverse the ridge tops, drainages, and canyon bottoms. Elevations across the project area range from 6,424 ft (1,958 meter [m]) above mean sea level (amsl) at the Pine Spring Federal 12-28-14-22 well pad in the western portion of the project area to 7,749 ft (2,362 m) amsl on top of Seep Ridge near the Main Canyon State 24-21-15-23 well pad.

As part of the Transitional Uinta Basin ecosystem, the project area includes topography, flora, and fauna from the Northwestern Plains, Eastern Great Basin, and the Colorado Plateau (Craven and Highland 2002).

Figure 2. Project location map showing surveyed area for Trapp Spring Federal 43-21-14-23.

Figure 3. Project location map showing surveyed area for Pine Spring Federal 12-28-14-22.

Figure 4. Project location map showing surveyed area for Trapp Spring Federal 11-24-14-23.

Figure 5. Project location map showing surveyed area for Main Canyon State 24-21-15-23.

Figure 6. Overview of the topography of the project area near Trapp Spring Federal 43-21-14-23, facing south-southeast.

Geologically, the Uinta Basin consists of layers of Cretaceous and Tertiary period formations as well as the Eocene age Green River Formation. This formation contains deposits of carbonate beds, sandstone, and claystone. Erosion and running water were significant forces in shaping the landscape of the area. Water sources for the area include the drainages of Main Canyon and Jacks Canyon, as well as several ephemeral drainages running from Seep Ridge; however, permanent flow of water from these sources is doubtful.

The soils in the project area are loamy-skeletal, meaning that over 35 percent of their volume consists of rock fragments and less than 35 percent is clay. Upland soils are generally shallow (under 51 centimeters [cm] to bedrock) and are mixed with rock outcrops and regolith from the decomposing bedrock. The only soils predicted to be over 200 cm deep are streamside deposits of alluvium (Natural Resources Conservation Service [NRCS] 2005), although pockets, slopewash, colluvium, and possibly even aeolian sediment are likely to extend at least 200 cm to bedrock in certain geomorphological settings. Upslope from these streamside deposits, certain concave toe and foot slopes are likely to yield over 100 cm of Holocene sediment. However, the soil data indicate that most backslopes, shoulders, and summits across the project area have a depth to bedrock of less than 100 cm, and in many cases the depth is less than 50 cm.

The climate in the area is temperate with extreme hot and cold, depending on seasonal variability. The semi-arid climate is also based on elevation, which allows for extreme heating during the day and rapid cooling at night. Precipitation occurs during the spring and autumn from thunderstorms and in the winter from snow, but accumulation is usually less

than 8 inches (in) per year. From weather stations in Bonanza, Myton, Ouray, Vernal, and Watson, based on the U.S. Department of Agriculture (USDA) Weather Bureau Climatic Summaries for 1875 through 1978, the average temperature in the project area is 46.3 degrees Fahrenheit (°F), with an average high of 65.3 °F and an average low of 32.8 °F (Reynolds et al. 1983). The average temperature for Vernal, Utah, which is north of the project area, is 45 °F with an average high of 61 °F and an average low of 29 °F (www.weatherbase.com).

Vegetation in the project area consists mainly of an Upper Sonoran pinyon-juniper woodland and a mixed conifer forest (Figure 7). Plant species include juniper (*Juniperus* sp.), pinyon (*Pinus edulis*), ponderosa pine (*Pinus ponderosa*), big sagebrush (*Artemisia tridentate*), rabbitbrush (*Chrysothamnus nauseosus*), four-wing saltbrush (*Atriplex canescens*), shadscale (*Atriplex confertifolia*), greasewood (*Sarcobatus vermiculatus*), prickly pear cactus (*Opuntia polyacantha*), Indian rice grass (*Oryzopsis hymenoides*), and other unidentified forbs and grasses.

Figure 7. Example of the vegetation and access within the project area.

Area. Common mammals include elk (*Cervus elaphus nelsoni*), mule deer (*Odocoileus hemionus hemionus*), black bear (*Ursus americanus)*, mountain lion (*Felis concolor*), cottontail (*Sylvilagus* sp.), and various rodents.

CULTURAL HISTORY

The project area is within the Tavaputs Plateau on the southern boundary of the Uinta Basin. The culture history of the Uinta Basin can be generally applied for the project area and surrounding regions, although recent investigations have potentially identified local prehistoric adaptations that vary slightly from the surrounding larger region. The Uinta Basin is a transitional environment that is influenced both ecologically and culturally by the surrounding regions, which include the Northwestern Plains, Eastern Great Basin, and the Colorado Plateau (Craven and Highland 2002). Technological and archaeological influences from these regions have created a unique cultural context for the Uinta Basin that dates from the Paleoindian, Archaic, Formative, Protohistoric, and Historic periods.

Paleoindian occupation in the Uinta Basin occurred 13,000 to 8,000 years before present (B.P.), or approximately 11,050 to 6,050 BC, and is evidenced by isolated projectile points from surface finds. Projectile point types found in this area include Clovis, Folsom, Goshen, Agate Basin, Hell Gap, Eden-Scottsbluff, Alberta, and Cody, although typology is complicated by geographical variations. In Spangler's (1995) synthesis of the Uinta Basin, only 14 Paleoindian sites had been identified in the region, none of which had stratified deposits. Most Paleoindian settlements were located near lakes and riverbanks, with a heavy reliance on processing big game, as seen in the Northwestern Plains (Frison 1991). No chronometric dates are available for the period and little is known concerning the Paleoindian lifestyle in the Uinta Basin.

The Archaic period in the Uinta Basin follows the general adaptive shifts of the Great Basin into Early, Middle, and Late Archaic periods. Generally, the Archaic period is based on a hunter-gatherer lifestyle, with an increasing reliance on processed plants near the end of the period. Although projectile point typologies change during the periods, the Elko series remains a constant throughout the Archaic. Other projectile point typologies associated with the Archaic include Pinto, Hawken side-notch, Sudden side-notch, Rocker Base side-notch, McKean Complex, and Mallory (San Rafael side-notch) (Elkins and Montgomery 2002; Hauck 1991). Rock art typologies associated with the Archaic period in the Uinta Basin include Barrier Canyon Style (BCS), Uncompahgre style, and the General Abstract Tradition.

During the Early Archaic period, approximately 6,050 to 4,050 BC, the hunter-gatherers began to use the area year round, relying on processed seeds and a more diverse food base than was interpreted for the Paleoindian period. Evidence for Early Archaic lifestyle is found in the dry caves of the Great Basin during the Bonneville period with small hearths, projectile points, and milling stones. However, most Early Archaic occupation is evidenced by concave-base and stemmed projectile points, including the Pinto series, Elko series, Humboldt, Northern side-notch, Sudden side-notch, Rocker Base side-notch, and Hawken side-notch points (Elkins and Montgomery 2002). Early Archaic sites recorded in the Unita Basin include sand dune sites and rockshelters along major drainages (Elkins and Montgomery 2002). No radiocarbon dates are available for this period in the Uinta Basin (Spangler 1995).

During the Middle Archaic period (4,050 to 550 BC), inhabitants also relied heavily on processed plants as evidenced by stratified deposits in Danger and Hogup caves during the

Wendover period. Hunting still played an important role in the Middle Archaic and is represented by the McKean and Elko series projectile points. Similarities to both the Eastern Great Basin and Northwestern Plains are seen in the Uinta Basin archaeological record during this time period. Archaeologists have excavated a few Middle Archaic sites in the vicinity of the current project area that exhibited stratified deposition (Elkins and Montgomery 2002).

The Late Archaic period hunter-gatherer lifestyle, dating from 500 BC to AD 450, shifts to an increased reliance on plant processing with evidence of horticulture and semi-permanent architecture (semi-subterranean habitation structures) towards the end of the period (Craven and Highland 2002). As populations increased, new technologies such as the bow and arrow, maize horticulture, and ceramic production came into use. The numerous projectile point variations seen during the Early Archaic are not seen as much during the Late Archaic and projectile types include Rose Spring, Stemmed Uncompahgre, and the Elko series (Elkins and Montgomery 2002). Cultural influences from the Northern Colorado Plateau and Great Salt Lake areas had an effect on cultural changes in the Uinta Basin.

The Formative stage had an increase in sedentism between AD 500 and AD 650 and continuing until approximately AD 1250. The Formative stage in eastern Utah is usually referred to as the Fremont, which is further broken down into named regional variants and adaptations. Previously, Formative groups in the current project area have been classified as both Uinta Basin and Northern San Rafael Fremont cultural groups (Marwitt 1970; Schaafsma 1994). Spangler (1995, 2000a, 2000b) has defined the Tavaputs Plateau adaptation, combining the Uinta Basin and Northern San Rafael Fremont classifications. This adaptation includes Formative (Fremont) groups who occupied and utilized the Book Cliffs, and East Tavaputs and West Tavaputs Plateau regions (Spangler 2000a, 2000b).

Fremont cultures are generally characterized by a sedentary lifestyle including horticulture, hunting and gathering, pit houses, stone architecture, and ceramics (Spangler 2000a, 2000b; Fagan 1995). Ceramics were dominated by graywares. Elaboration of ceramics included figurines, specialized vessels, and pipes. Projectile points associated with Formative cultures include Cottonwood Triangular, Rose Spring, Eastgate, Elko series, and a number of regional variants. Fremont rock art was influenced by many regional types throughout the Great Basin. The Formative stage in the current project area is represented by the Tavaputs Plateau adaptation (AD 1000 to AD 1350), a local Fremont variation influenced by surrounding Fremont variants as well as the distinctive geography and topography of the Tavaputs Plateau (Spangler 2000a, 2000b). Spangler (2000a, 2000b) suggests that this local adaptation employed distinctive subsistence, storage, and settlement strategies in order to adapt to the deeply incised canyons of the Tavaputs area. These sites were situated along stream terraces and on outcrops having good access to pinyon-juniper resources, permanent water, and arable land. Spangler (2000a) notes that the Tavaputs Plateau adaptation generally constructed dry-laid masonry, masonry towers, and complex storage structures on cliff ledges and in crevices. Although ceramics are extremely rare in the Tavaputs Plateau adaptation, they consist of Emery grayware tempered with non-local basalt, versus the readily available and local limestone or calcite (Spangler 2000b). Rock art associated with the Tavaputs Plateau

adaptation displays different Fremont characteristics than those of the Uinta Basin adaptation to the north (Spangler 2000b).

During the Protohistoric period (AD 1200 to the late 1800s) the Uinta Basin was populated by hunter-gatherer groups including the Eastern Shoshone and ancestors of the present-day Ute (Craven and Highland 2002). These cultural groups returned to a less sedentary lifestyle, relying on seasonal round movement for harvesting plants and seeds. Artifacts of this period include basketry, brownware ceramics, conical huts or wickiups, elaborate leather items, Desert Side-notched projectile points, and rock art depicting horses, or other Euro-American themes (Thomas et al. 1986). Spangler (2000b) notes that archaeological evidence suggests there was a limited Shoshone and Ute utilization and/or occupation of the Tavaputs Plateau. Very few sites represent either Ute or Shoshone occupation in the East Tavaputs Plateau although rock art and a few diagnostic projectile points provide evidence of their presence in this area (Spangler 2000b).

The Uinta Basin area was also used historically by Euro-Americans including Spanish, French, and American explorers, fur trappers and traders, and Mormon pioneers. The north branch of the "Old Spanish Trail" went through the Uinta Basin from Fort Uinta, down through the Roan and Book Cliffs Ranges, through the Eastern Great Basin, and into western Colorado (Nelson 1996). The Western-Willow Creek Trail was utilized by traders and explorers and is marked with inscriptions from Spanish travelers. Trails on Seep Ridge and in Pine Springs Canyon were also used in conjunction with the "Old Spanish Trail." An inscription, 20 mi south of the project area by Antoine Robidoux, dating to 1837, provides written documentation of French exploration and travel through the Eastern Great Basin region and into the Uinta Basin.

Recent historical use of the Uinta Basin includes cattle ranching, farming, sheep herding, mining, and hydrocarbon resource exploitation (Burton 1995). Large cattle companies began utilizing the free access to grass and water in this area in the 1880s (Burton 1995). Near the project area, early ranchers and settlers of Willow Creek included the Turner brothers, the Shires, Dick Tomlinson, Riley Flynn, and the Meadows, to name a few (Burton 1995). Native American allotments were scattered within this area and several of the early historic settlers were of Native American heritage. Government Land Office patent records show a relatively small number of private individuals were granted land patents in the project area between 1929 and throughout the 1930s. The Civil Conservation Corps improved access into this area in the 1940s with the development of existing trails and roads. Artifacts associated with these activities include historic can and trash scatters, corrals and ranching debris, sheepherder camps, prospecting pits and shafts, and other isolated artifacts such as bottles, cans, and ceramics (Craven and Highland 2002). Names, cattle brands, dates, and images inscribed into the sandstone exposures in the project area provide further evidence and absolute dates for historic presence.

CLASS I FILE SEARCH

A Class I file search was conducted by SWCA in March 2007 using records stored at the Utah Division of State History. An additional file search was conducted by Michael Retter at the BLM VFO in April 11, 2007. The file searches identified previous cultural resource projects and previously recorded sites within a 1-mi buffer of the project area.

The file searches identified 9 sites: 8 prehistoric sites including rockshelters, rock art, and grinding surfaces and 1 historic camp debris scatter. None of these sites are within the project APE. Information pertaining to these sites is provided in Table 1.

All previously recorded eligible rock art and rockshelter sites identified within the project vicinity during the file search were visited to ensure a minimum buffer distance of 300 ft from the project corridor.

Table 1. Previously Recorded Sites within the Project Vicinity.

Site Number	Eligibility	Site/Isolate Type	Landowner	T/R/S	In APE?
42UN1079	E	Prehistoric Rockshelter	BLM VFO	14S/23E/22	No
42UN1081	NE	Prehistoric Grinding Surface	BLM VFO	14S/23E/21	No
42UN1120	E	Prehistoric Rock Art	BLM VFO	14S/22E/28	No
42UN1121	E	Prehistoric Rock Art	BLM VFO	14S/22E/29	No
42UN1122	NE	Prehistoric Rock Art	BLM VFO	14S/22E/28	No
42UN1146	NE	Prehistoric Rock Art	BLM VFO	14S/22E/29	No
42UN1147	NE	Prehistoric Rock Art	BLM VFO	14S/22E/29	No
42UN1148	NA	Historic Camp/Debris Scatter	BLM VFO	14S/22E/29	No
42UN1180	NE	Prehistoric Bedrock Mortar	BLM VFO	14S/23E/22	No

APE = Area of potential effect
BLM = Bureau of Land Management
E = Eligible
NE = Not Eligible
NA = Not Available
T/R/S = Township/Range/Section
VFO = Vernal Field Office

Based on results of the file searches, nine cultural resource compliance projects have been conducted within a 1-mi radius of the project area. Inventories included five combination

block/linear inventories, three linear inventories, and one block inventory. A summary of previous cultural resource surveys in the general vicinity of the project area is provided in Table 2.

Table 2. Previous Inventories within the Project Vicinity.

Project Number	Project Name	Location T/R/S	Inventory Type
80GA452b	Coseka Well #8-36-14-23 and Access Road	14S/23E/36; 15S/23E/1	Block/Linear
81BL645	The Bookcliffs Area Study (A Random Sample Inventory of Cultural Resources)	Numerous/See Report	Block
95GB484	Cultural Resource Inventory for the Proposed Monument Ridge Spring Development/Range Improvement Project in Uintah County, Utah for Alameda Corporation	T14S/R23E/S11,13,14,21; T14S/R22E/S22-27,33-36; T14S/R24E/S18-20,29-31; T15S/R23E/S2,3,10-12,14,24,36	Block/Linear
01MQ532	Cultural Resource Inventories of Well Locations Fence Canyon #21-2, Fence Canyon #29-2, Fence Canyon #32-3 and Fence Canyon #33-4, Grand and Uintah Counties, Utah	15S/23E/21,29,32,33	Block/Linear
01MQ531	Cultural Resource Inventory of Well Locations Fence Canyon #21-2, Fence Canyon #29-2, Fence Canyon #32-3, and Fence Canyon #33-4, Grand and Uintah Counties, Utah	15S/23E/21,29,32,33	Block/Linear
02NV340	Western Geco Horse Point 3-D	15S/23E/19,20,21,22,23,26-35	Linear
03MM0652	Class III Cultural Resource Inventory Report for Carbon Energy Corporation's Proposed Pine Springs State 6-36-14-22, Pine Spring Federal 15-21-14-22, Pine Springs Federal 4-22-14-22, and Bryson Canyon 11-34-16-34 Wells and Access Roads, Uintah and Grand Counties, Utah	Numerous/See Report	Block/Linear
U-04-ST-0432 b, p, s	Class III Cultural Resources Inventory, Main Canyon 3-D Seismic Project Uintah County, Utah	14S/22E/25 and 35-36; 14S/23E/29-35; 15S/23E/2-11 and 14-17; 15S/22E/1-2 and 12-13	Linear

Project Number	Project Name	Location T/R/S	Inventory Type
05ST1038	Class III Cultural Resource Inventory of the Park Ridge 3-D Geophysical Exploration Project Area, Uintah County, Utah	Numerous/See Report	Linear

T/R/S = Township/Range/Section

FIELDWORK METHODS

This section describes the field methods used during this project and the criteria involved in evaluating site significance.

INVENTORY AND RECORDING METHODS

The APE for the current project consisted of four 10-ac block areas (each centered on a proposed well pad), and a 60-m (200-ft)-wide corridor for 2.21 mi of proposed pipeline centerline, 0.81 mi of access road, and 4.93 mi of co-located pipeline with access road on State and BLM-administered lands. The pipeline centerline, roads, and well pads were identified, mapped, and marked with orange flagging during the layout phase of the project.

SWCA archaeologists surveyed the APE for the linear project component using double, 15-m-wide zigzag transects, as well as quad, 15-m-wide zigzag transects; the well pad blocks were surveyed using 15-m-wide transects. The ground surface was examined for artifacts, features, or other evidence such as charcoal-stained sediments with special attention focused on anthills, eroded areas, cutbanks, animal burrows, and two-track roads. Ground visibility during the project ranged from 60 to 70 percent.

Following Utah BLM Guidelines, a site was defined as the remains of past human activity, at least 50 years old, and consisting of one or more of the following:

- At least 10 artifacts of a single class (e.g., 10 sherds) within a 10-m diameter area, except when all pieces appear to originate from a single source (e.g., one ceramic pot, one glass bottle).
- At least 15 artifacts which include at least 2 classes of artifact types (e.g., sherds, nails, glass) within a 10-m diameter area.
- One or more archaeological features in temporal association with any number of artifacts.
- Two or more temporally associated archaeological features without artifacts.

Per the above outlines, rock piles were recorded as sites if there was reason to believe they were aboriginal. Similarly, historic rock piles such as mining cairns were recorded as sites if believed to be of particular importance. Additionally, single hearths, small rock rings, or small rock alignments without any associated cultural materials or without apparent potential for yielding dates, or faunal or floral samples, were not recorded as sites unless they were

believed to be of sufficient importance. Artifacts that did not meet the requirements of the site classification were recorded as isolated occurrences (IOs).

Archaeological discoveries less substantial than those defined above were recorded as sites if they were believed important enough to enter into the Intermountain Antiquities Computer System (IMACS) automated cultural resource database.

Site recording consisted of establishing the site boundaries by flagging all associated artifacts and/or features; generating a site map depicting the location of the site in relation to source lines by using a Trimble ProXR Global Positioning System (GPS) unit; summarizing the site setting, topographic, vegetation, depositional, geographical, and environmental contexts, and previous impacts; recording summary information concerning feature(s) and other archaeological material, including the dimensions and qualitative characteristics; and photographing the overall site setting and each feature (if present). Sites were plotted on 1:24,000 scale project maps. The GPS unit is accurate to within 10 cm along the x and y axes and 20 cm along the z axis. All linear features such as site boundaries, roads, fence lines, and vegetation communities, as well as point features such as the site datum, features, and tools, were mapped with the GPS unit. Field GPS data was post-processed using the Mesa County Cooperative CORS Base Station data and projected into Universal Transverse Mercator (UTM), Zone 12 north, North American Datum 1927. All GPS data was exported into ArcView 9.1 shapefiles and plotted onto the associated geo-referenced U.S. Geological Survey (USGS) 7.5' quadrangle to ensure accuracy and produce location maps of all resources. To create the site maps, the site image was enlarged in the ArcView program and the maps were drafted digitally, including the contour intervals from the original topographic maps. ArcView was used to measure site dimensions, acreage, and calculate UTM points.

A white 0.75-in diameter polyvinyl chloride (PVC) pipe site datum, with a metal tag inscribed with the temporary site number, date, and SWCA, was driven into the ground at each newly recorded site. IMACS forms were completed for each of the newly recorded sites, and previously recorded sites that required rerecording or updates.

An inventory of associated artifacts was also completed for each site. For prehistoric sites, this included classifying artifacts into broad technological/morphological categories according to type and relative amount of reduction they have undergone. While not mutually exclusive, three reduction sequences resulting in different idealized end products are defined. The first sequence involves the reduction of flakes, pebbles, cobbles, and cores into bifacial implements. It is referred to as the biface reduction sequence, and it results in the production of various classes and stages of bifaces, including projectile points and other final bifaces, preforms, blanks, and preblanks. The second reduction sequence involves the use of flakes removed from nodules, cores, bifaces, and other source material as flake tools. Flake tools are classified as retouched flake tools if one or more of their margins has been modified or utilized flake tools if the flake exhibits evidence of use but no modification. The third reduction sequence involves the limited modification (or flaking) of cobbles, pebbles, and other nodules as tools. Certain attributes were recorded for all flaked stone tools, including portion, length, width, and thickness (in cm), and raw material type. The unutilized debris

resulting from flaked stone reduction is classified as debitage, which includes flakes and shatter. Flakes are classified in terms of the amount of cortex exhibited on their exterior surface and according to their size grade. Flakes with more than 90 percent cortex are classified as primary flakes, flakes with 10 to 90 percent are classified as secondary flakes, and flakes with less than 10 percent cortex are classified as tertiary flakes. These categories are intended to roughly differentiate flakes removed at various stages during the reduction process. Shatter (or angular fragments) consists of indistinguishable angular debris resulting from the failure of cores, tool blanks, flakes, or other pieces of raw material during the lithic reduction sequence. Raw material types were noted for each flake. Projectile points were photographed and classified using types described in the archaeological literature for the Great Basin (Holmer 1986; Jennings 1978).

Historic archaeological sites were recorded in a similar manner. Observed artifacts were recorded by material type (for example, glass and metal) and object class (in other words, tin can, bottles, plates). Glass color was described since this can be diagnostic to certain periods. Measurements and diagnostic attributes, especially maker's marks, were described and sketched.

RESULTS

One newly recorded site and two IOs were discovered during the course of the project. Site and IO forms are provided in detached Appendix B and the site and IOs are described below.

NEWLY RECORDED SITE

42UN5808

Site Type: Possible Historic Headstone
Temporal Period: Unknown Historic
Maximum Size: 3.3 by 3.3 ft

Site Description: The site consists of an inscribed upright sandstone slab most likely representing a historic headstone. The site is located on a highly vegetated finger ridge of Seep Ridge with a slope of 0 to 5 degrees (Figures 8 and 9). Pinyon-juniper woodland dominates the site vegetation, but is supplemented with some small oakbrush and sagebrush. Soils on site are a brown and tan clay loam with 90 percent tabular gravel inclusions covered by at least 1 in of pine duff. Deposition at the site is residual with varying depths. Large sandstone slabs are present on the site and indicate areas of moderate deposition, however there are areas of greater soil accumulation around vegetation. The site has been minimally disturbed by alluvial erosion.

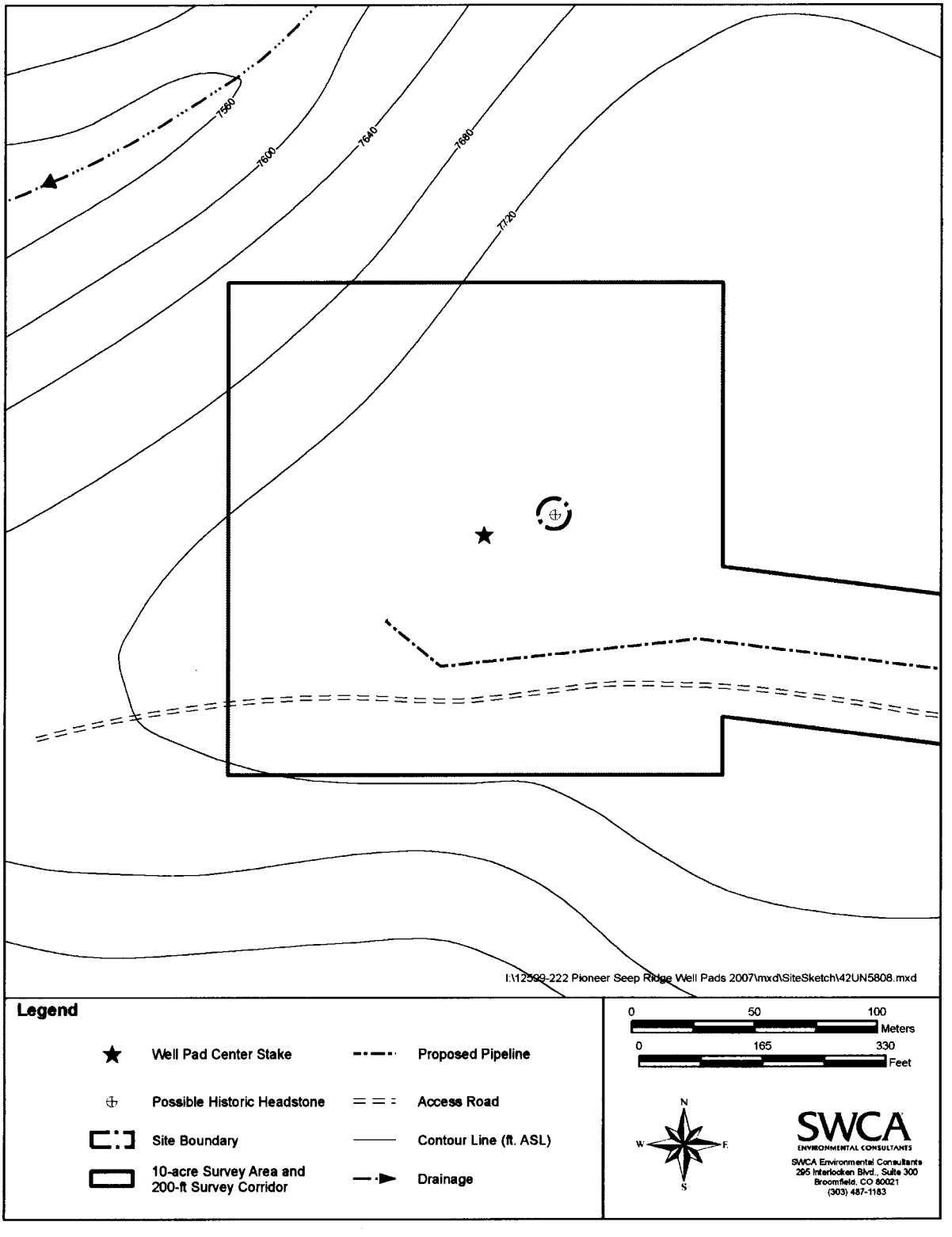

Figure 8. 42UN5808 site map.

Figure 9. 42UN5808 overview of site location, facing north-northeast.

Inscribed on the upright sandstone slab is "IV," carved onto the south-facing side of the marker (Figures 10 and 11). The stones are weathered and moderate lichen growth is apparent within the carved inscription indicating that the carving is most likely historic in origin. The marker measures 3 1/2 in thick, ranges from 8 to 15 in wide, and is 14 3/4 in at the highest point from the base of the ground. Based on striations, depth of the inscription, and the appearance of the rock surface, the carving was most likely inscribed with a metal instrument. The carving begins 7 in from the ground and ends 4 in from the top of the marker; the carving is 4 in high, and ranges from 2 1/2 to 3 1/2 in wide. Three additional stones lay flat at the base of the upright marker and appear to be supporting it. The surrounding stones measure 10 by 6 in, 12 1/2 by 8 1/2 in, and 12 in long by 6 to 11 in wide, respectively, clockwise from the north. The stone to the southwest is 8 1/2 in from the upright marker. The marker is fairly stable with approximately 1 to 2 in of soil and duff surrounding the base. No other artifacts or features were observed within the immediate area.

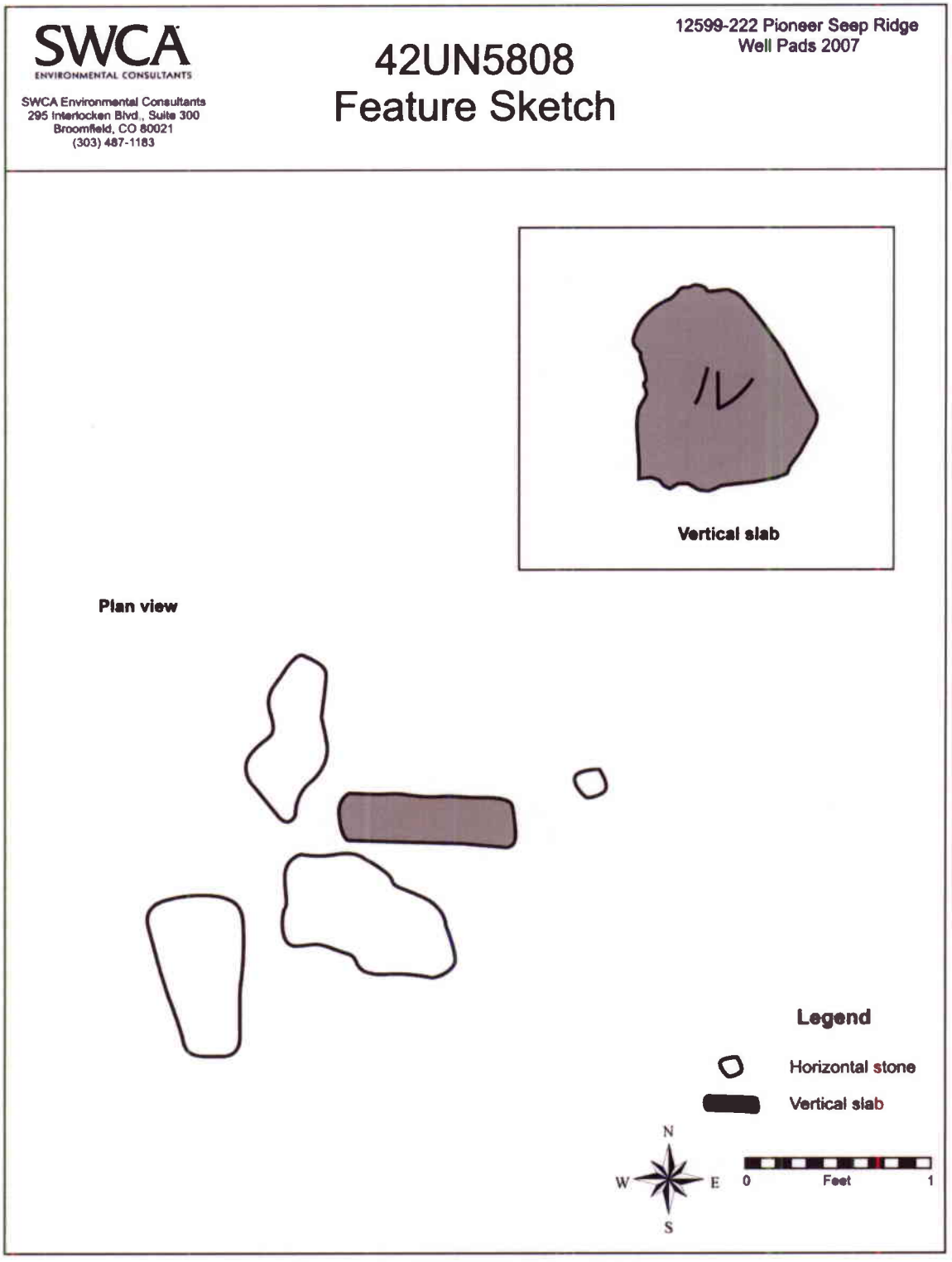

Figure 10. 42UN5808 figure sketch.

Figure 11. Detail of historic inscription at 42UN5808.

Blaine Phillips of the BLM-VFO was contacted regarding this site to which he suggested two possibilities: a historic headstone or a mining claim marker (Blaine Phillips, personal communication 2007). To determine if the site was a possible mining claim marker, an intensive file and records search was conducted at the Utah Department of Gas and Mining on May 1, 2007. The search revealed that there were no mining claims in the vicinity of the site and the marker most likely was not associated with any mines or mining activity in the area. No mining claims were made in this area and the nature, structure, and placement of the stones indicate it is most likely a historic headstone.

The nature, structure, and placement of the stones as well as the inscription indicate that this site is most likely a historic headstone marking a grave. A few graves have been observed in the area (i.e., 42UN4516) and are consistent with the characteristics of this site. No formal records can be found that correlate the grave with a known person.

NRHP Eligibility and Project Effect: Although no formal records can be found that correlate the grave with a known person or event in history, sites of this type are rare in the immediate area and it is recommended that 42UN5808 be eligible for the National Register of Historic Places (NRHP). Given the location of the grave in areas of historic logging and hunting camps, it is possible that the grave represents a logger/hunter burial. It is also possible that this site is associated with historic exploration, homesteading, or ranching. Due to the lack of information on the suspected headstone, and any other diagnostic features, a date for the grave cannot be adequately defined other than to say it was erected sometime during the last 200 years.

Management Recommendations: 42UN5808 lies less than 80 ft from the centerstake of the proposed Main Canyon State 24-21-15-23 well pad. This site most likely contains an historic grave and headstone and is recommended eligible for nomination to the NRHP. To avoid impacts to the resource, this well pad should be relocated at least 100 ft from the site.

ISOLATED OCCURRENCE

Two IOs were discovered during the inventory. IO-1 consists of four chalcedony flakes and one quartzite biface (FT1). The flakes include one size 2 tertiary flake, two size 3 tertiary flakes, and one size 2 secondary flake. FT1 is a mid-stage tan quartzite biface with biconvex tranverse cross-section and a plano-convex longitudinal cross-section. The biface does not retain any cortex but does exhibit evidence of bifacial edge retouch along one lateral margin. The tool measures 32 by 17 by 6 millimeters (mm). IO-2 consists of one chalcedony, size 3 tertiary flake observed on a deflating residual ridge top. Isolates, by definition, are not eligible for nomination to the NRHP. Project activities will have no effect on these cultural resources. IO forms are provided in detached Appendix B.

RESOURCE SYNTHESIS

The Class III cultural resource inventory for the four proposed well pads recorded one new archaeological site (42UN5808) and two IOs.

Newly recorded site 42UN5808 is a possible historic headstone. Although no formal records can be found that correlate the potential grave with a known person or event in history, sites of this type are rare in the immediate area and it is recommended that 42UN5808 be eligible for the NRHP.

SUMMARY AND MANAGEMENT RECOMMENDATIONS

During the Class III cultural resource inventory for the four proposed well pads and associated pipelines and access roads in the Seep Ridge area, one new archaeological site and two IOs were recorded. 42UN5808 consists of a historic headstone and is recommended eligible for nomination to the NRHP. This resource lies less than 80 ft from the proposed Main Canyon State 24-21-15-23 well pad. To avoid impacts to the resource, this well pad should be relocated at least 100 ft from the site. All project personnel should be instructed of the confidentiality of the site location and that the collection of artifacts is prohibited. If evidence of unknown prehistoric or historic sites is discovered during the course of this project, all activities within a 100-ft radius of the site(s) should cease immediately, and appropriate BLM personnel should be notified of the situation to ensure proper handling of the discovery.

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APPENDIX A
(Detached)

Project Location Maps (1:24,000 scale) Illustrating Site and Isolated Occurrence Locations

APPENDIX B
(Detached)

Utah IMACS Site and Isolated Occurrence Forms

PIONEER NATURAL RESOURCES USA, INC.

PINE SPRING FED #12-28-14-22

LOCATED IN UINTAH COUNTY, UTAH
SECTION 28, T14S, R22E, S.L.B.&M.

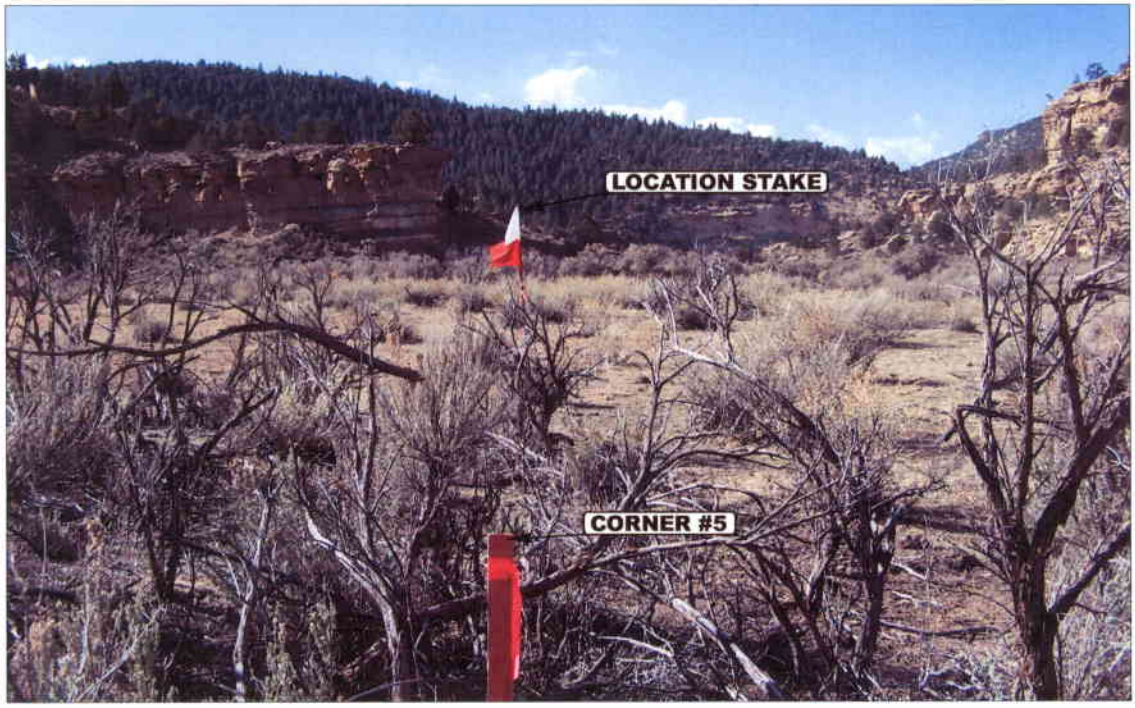
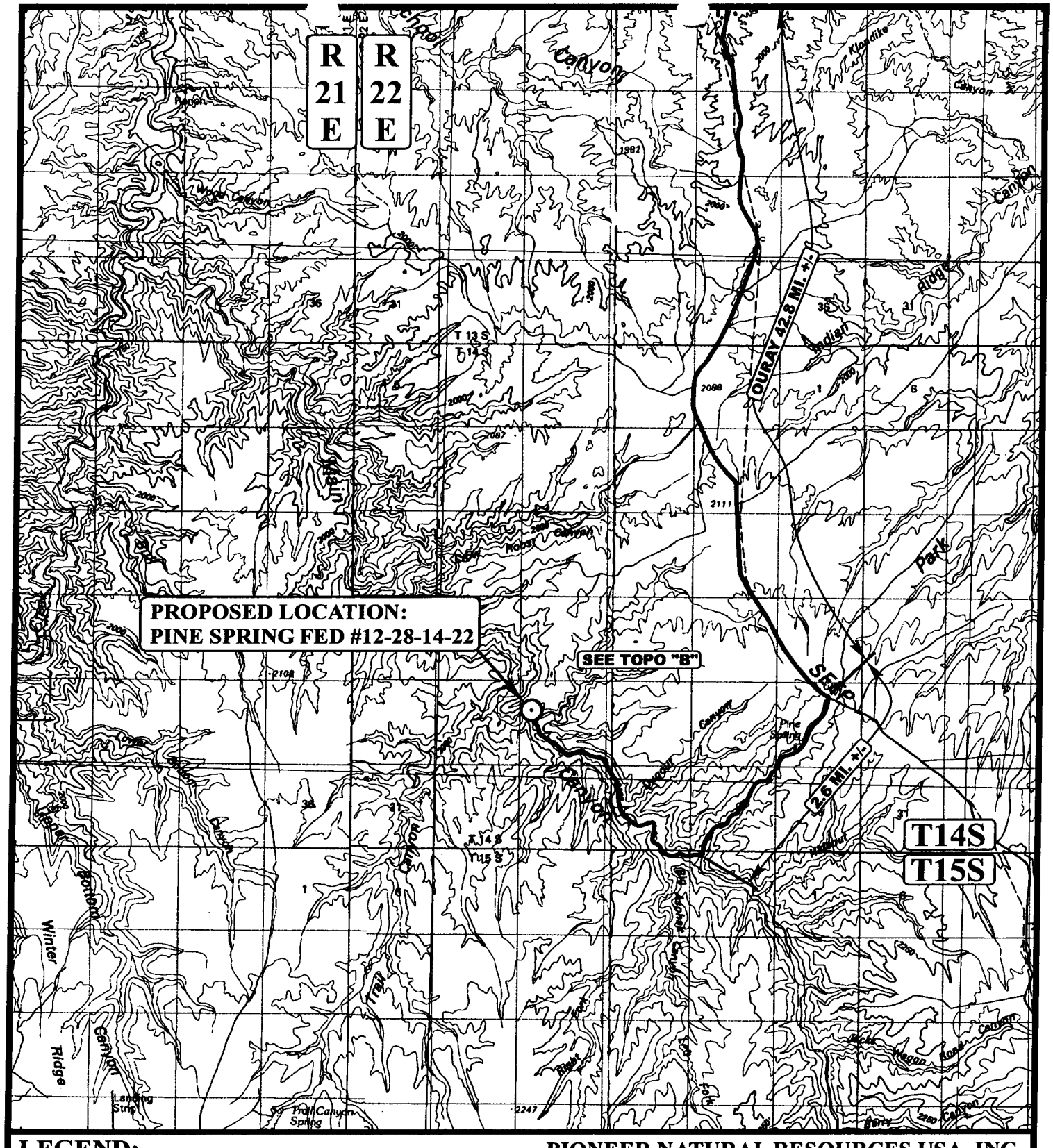


PHOTO: VIEW FROM OF LOCATION STAKE **CAMERA ANGLE: SOUTHWESTERLY**

PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS **CAMERA ANGLE: NORTHWESTERLY**

- Since 1964 -
Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
435-789-1017 uels@uelsinc.com

LOCATION PHOTOS	11 MONTH	13 DAY	06 YEAR	PHOTO
TAKEN BY: N.H.	DRAWN BY: C.P.	REVISED: 00-00-00		



LEGEND:

⊙ PROPOSED LOCATION

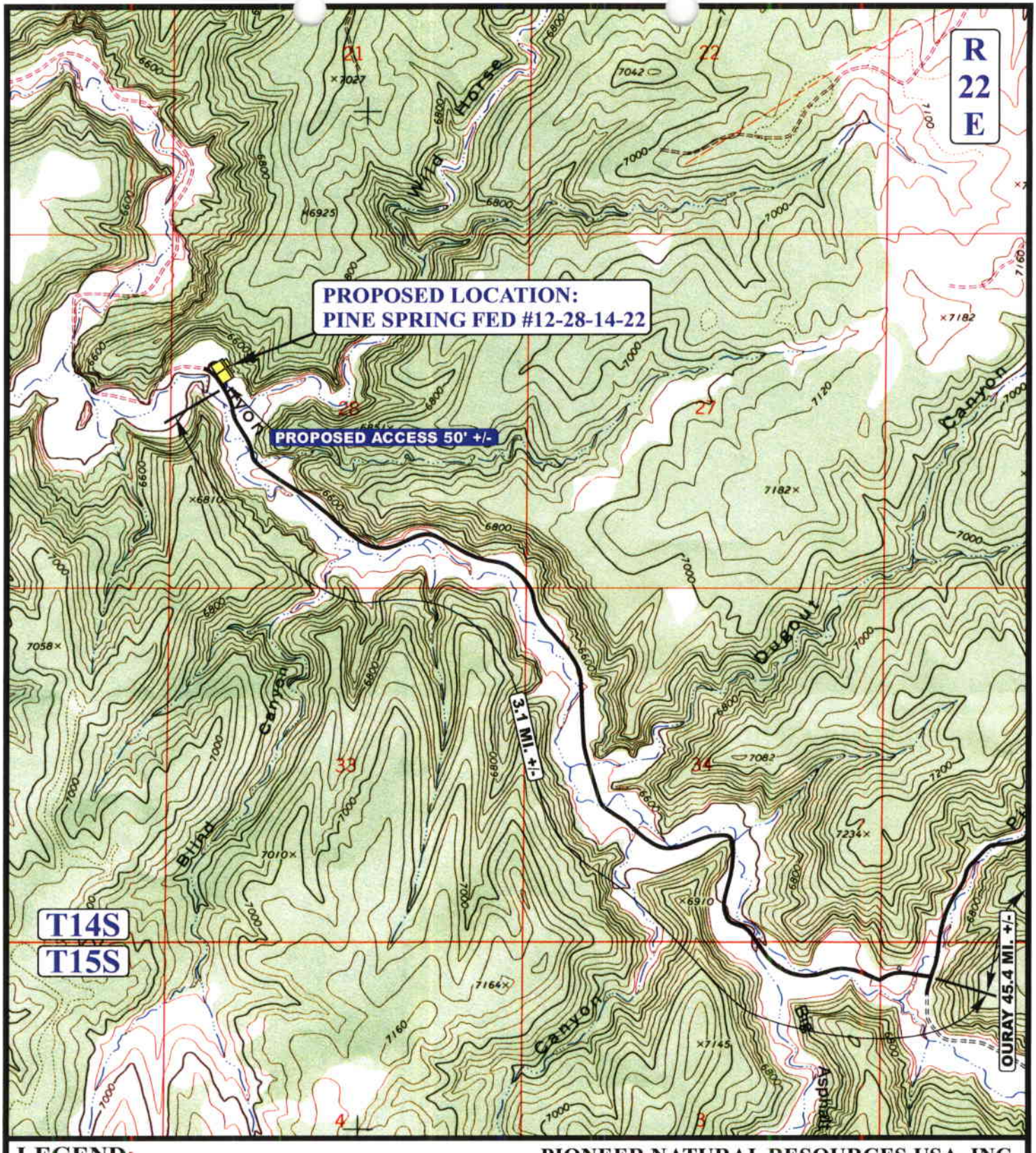
N

PIONEER NATURAL RESOURCES USA, INC.

PINE SPRING FED #12-28-14-22
SECTION 28, T14S, R22E, S.L.B.&M.
2020' FNL 807' FWL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	11 MONTH	13 DAY	06 YEAR	A TOPO
SCALE: 1:100,000	DRAWN BY: C.P.	REVISED: 00-00-00		



LEGEND:

EXISTING ROAD

PROPOSED ACCESS ROAD

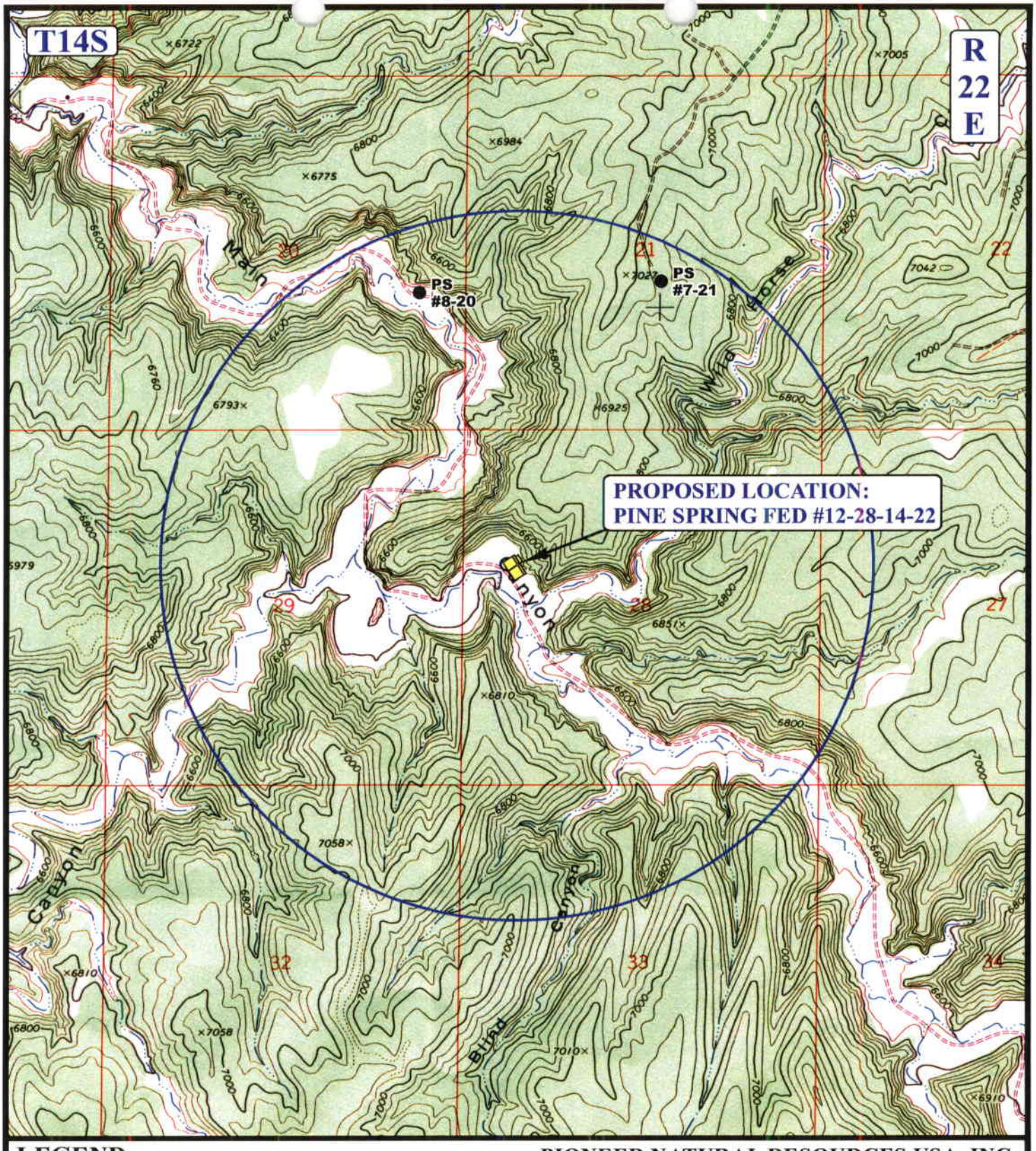
N

PIONEER NATURAL RESOURCES USA, INC.

PINE SPRING FED #12-28-14-22
SECTION 28, T14S, R22E, S.L.B.&M.
2020' FNL 807' FWL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

TOPOGRAPHIC MAP	11 MONTH	13 DAY	06 YEAR	B TOPO
SCALE: 1" = 2000'	DRAWN BY: C.P.	REVISED: 00-00-00		



LEGEND:

- DISPOSAL WELLS
- PRODUCING WELLS
- SHUT IN WELLS
- WATER WELLS
- ABANDONED WELLS
- TEMPORARILY ABANDONED

N

PIONEER NATURAL RESOURCES USA, INC.

PINE SPRING FED #12-28-14-22
SECTION 28, T14S, R22E, S.L.B.&M.
2020' FNL 807' FWL

Uintah Engineering & Land Surveying
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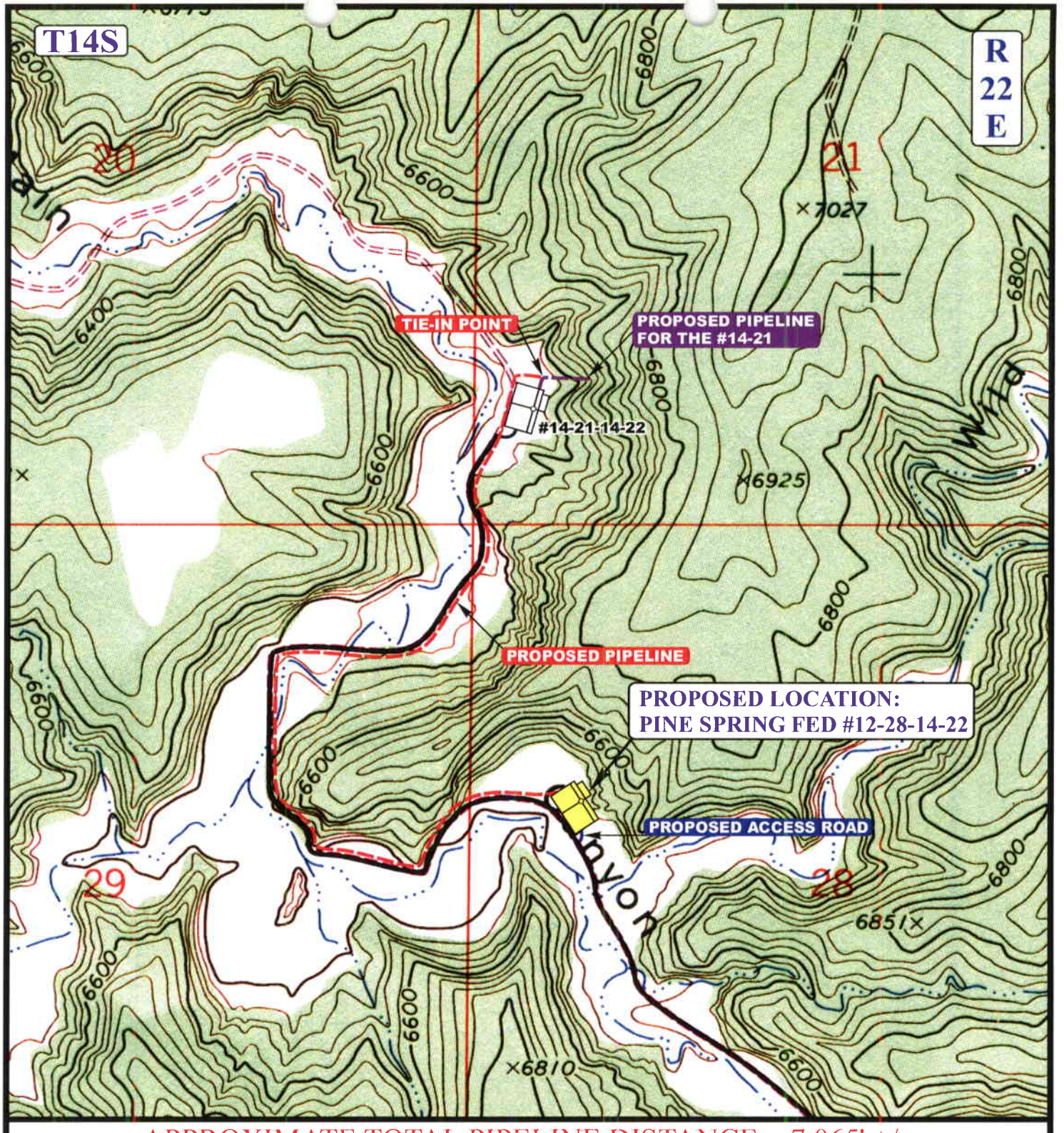
TOPOGRAPHIC MAP	11 MONTH	13 DAY	06 YEAR	C TOPO
SCALE: 1" = 2000'	DRAWN BY: C.P.	REVISED: 00-00-00		



APPROXIMATE TOTAL PIPELINE DISTANCE = 7,065' +/-

LEGEND:

PROPOSED ACCESS ROAD
EXISTING PIPELINE
PROPOSED PIPELINE

N

PIONEER NATURAL RESOURCES USA, INC.

PINE SPRING FED #12-28-14-22
SECTION 28, T14S, R22E, S.L.B.&M.
2020' FNL 807' FWL

Uintah Engineering & Land Surveying
85 South 200 East Vernal, Utah 84078
(435) 789-1017 * FAX (435) 789-1813

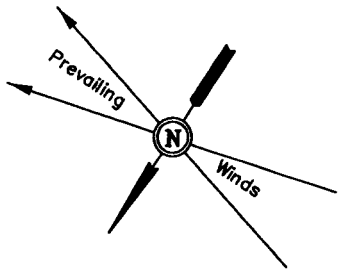
TOPOGRAPHIC MAP | 11 MONTH | 13 DAY | 06 YEAR | D TOPO

SCALE: 1" = 1000' | DRAWN BY: C.P. | REV: 12-07-06 L.K.

PIONEER NATURAL RESOURCES USA, INC.

LOCATION LAYOUT FOR

PINE SPRING FED #12-28-14-22
SECTION 28, T14S, R22E, S.L.B.&M.
2020' FNL 807' FWL



SCALE: 1" = 50'
DATE: 11-14-06
Drawn By: S.L.

NOTE:
Flare Pit is to be located a min. of 100' from the Well Head.

Total Pit Capacity W/2' of Freeboard = 4,720 Bbls. ± Total Pit Volume = 1,390 Cu. Yds.

Proposed Access Road
Approx. Top of Cut Slope
C-10.9' El. 34.5'
C-7.8' El. 31.4'
Sta. 3+25
Round Corners as needed
Topsoil Stockpile
Flare Pit
200'
45'
EXISTING ROAD
0.6'
REGISTERED LAND SURVEYOR
No. 161319
ROBERT L. KAY
STATE OF UTAH

Reserve Pit Backfill & Spoils Stockpile
CATWALK
PIPE RACKS
C-1.4' El. 25.0'
C-0.4' El. 24.0'
FUEL
DOG HOUSE
165'
Sta. 1+50
GRADE El. 23.6'
El. 25.9' C-12.3' (btm. pit)
50'
10'
45'
C-1.0' El. 24.6'
RIG
WATER
10' WIDE BENCH
120'
RESERVE PITS 10' Deep)
1:1 1/2 SLOPE
MUD TANKS
175'
PUMP
MUD SHED
HOPPER
POWER
TRAILER
TOILET
Sta. 0+80
F-1.3' El. 22.3'
TOOLS
FUEL
El. 25.4' C-11.8' (btm. pit)
TRASH
Reserve Pit Backfill & Spoils Stockpile
65'
STORAGE TANK
Sta. 0+00
Topsoil Stockpile
F-2.9' El. 20.7'
F-1.5' El. 22.1'
F-2.3' El. 21.3'
Approx. Toe of Fill Slope

Elev. Ungraded Ground at Location Stake = 6424.0'
Elev. Graded Ground at Location Stake = 6423.6'

FIGURE #1

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

PIONEER NATURAL RESOURCES USA, INC.

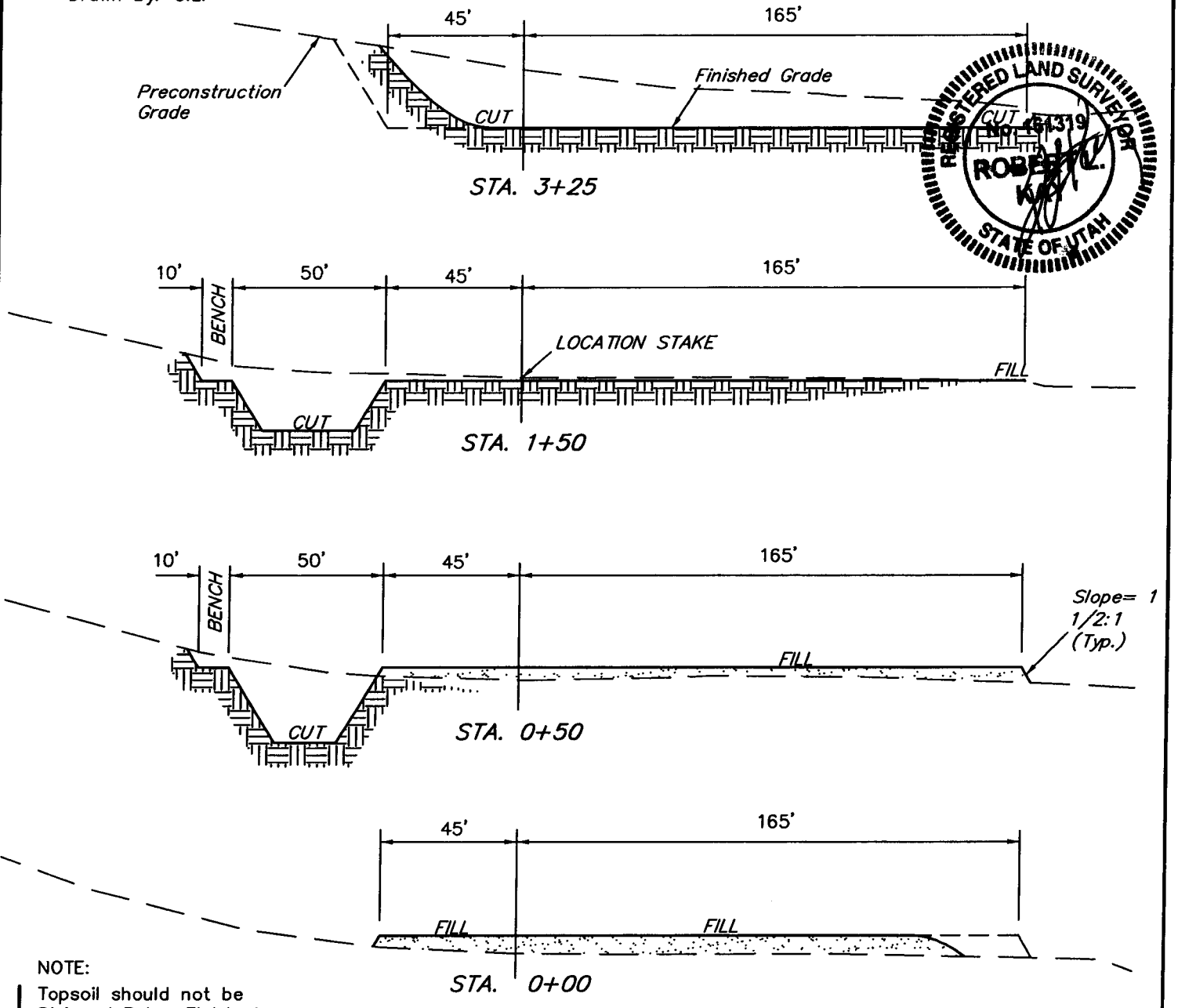
FIGURE #2

TYPICAL CROSS SECTIONS FOR

PINE SPRING FED #12-28-14-22
SECTION 28, T14S, R22E, S.L.B.&M.
2020' FNL 807' FWL

1" = 20'
X-Section Scale
1" = 50'

DATE: 11-14-06
Drawn By: S.L.



REGISTERED LAND SURVEYOR
ROBERT L. KAY
STATE OF UTAH

NOTE:
Topsoil should not be Stripped Below Finished Grade on Substructure Area.

APPROXIMATE YARDAGES

(6") Topsoil Stripping	= 1,650 Cu. Yds.
Remaining Location	= 5,570 Cu. Yds.
TOTAL CUT	= 7,220 CU.YDS.
FILL	= 2,530 CU.YDS.

EXCESS MATERIAL AFTER 5% COMPACTION	= 4,690 Cu. Yds.
Topsoil & Pit Backfill (1/2 Pit Vol.)	= 2,350 Cu. Yds.
EXCESS UNBALANCE (After Rehabilitation)	= 2,340 Cu. Yds.

UINTAH ENGINEERING & LAND SURVEYING
85 So. 200 East * Vernal, Utah 84078 * (435) 789-1017

WORKSHEET

APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/19/2007

API NO. ASSIGNED: 43-047-39819

WELL NAME: PINE SPR FED 12-28-14-22

OPERATOR: PIONEER NATURAL (N5155)

PHONE NUMBER: 303-857-9999

CONTACT: VENESSA LANGMACHER

PROPOSED LOCATION:

SWNW 28 140S 220E

SURFACE: 2020 FNL 0807 FWL

BOTTOM: 2020 FNL 0807 FWL

COUNTY: UINTAH

LATITUDE: 39.57275 LONGITUDE: -109.4657

UTM SURF EASTINGS: 631784 NORTHINGS: 4381253

FIELD NAME: UNDESIGNATED (2)

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-10199

PROPOSED FORMATION: WINGT

SURFACE OWNER: 1 - Federal

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

✓ Plat

✓ Bond: Fed[1] Ind[] Sta[] Fee[]
(No. MTB-000041)

N Potash (Y/N)

N Oil Shale 190-5 (B) or 190-3 or 190-13

✓ Water Permit
(No. 43-8496)

N RDCC Review (Y/N)
(Date:)

N/A Fee Surf Agreement (Y/N)

N/A Intent to Commingle (Y/N)

LOCATION AND SITING:

___ R649-2-3.

Unit: _____

✓ R649-3-2. General
Siting: 460 From Qtr/Qtr & 920' Between Wells

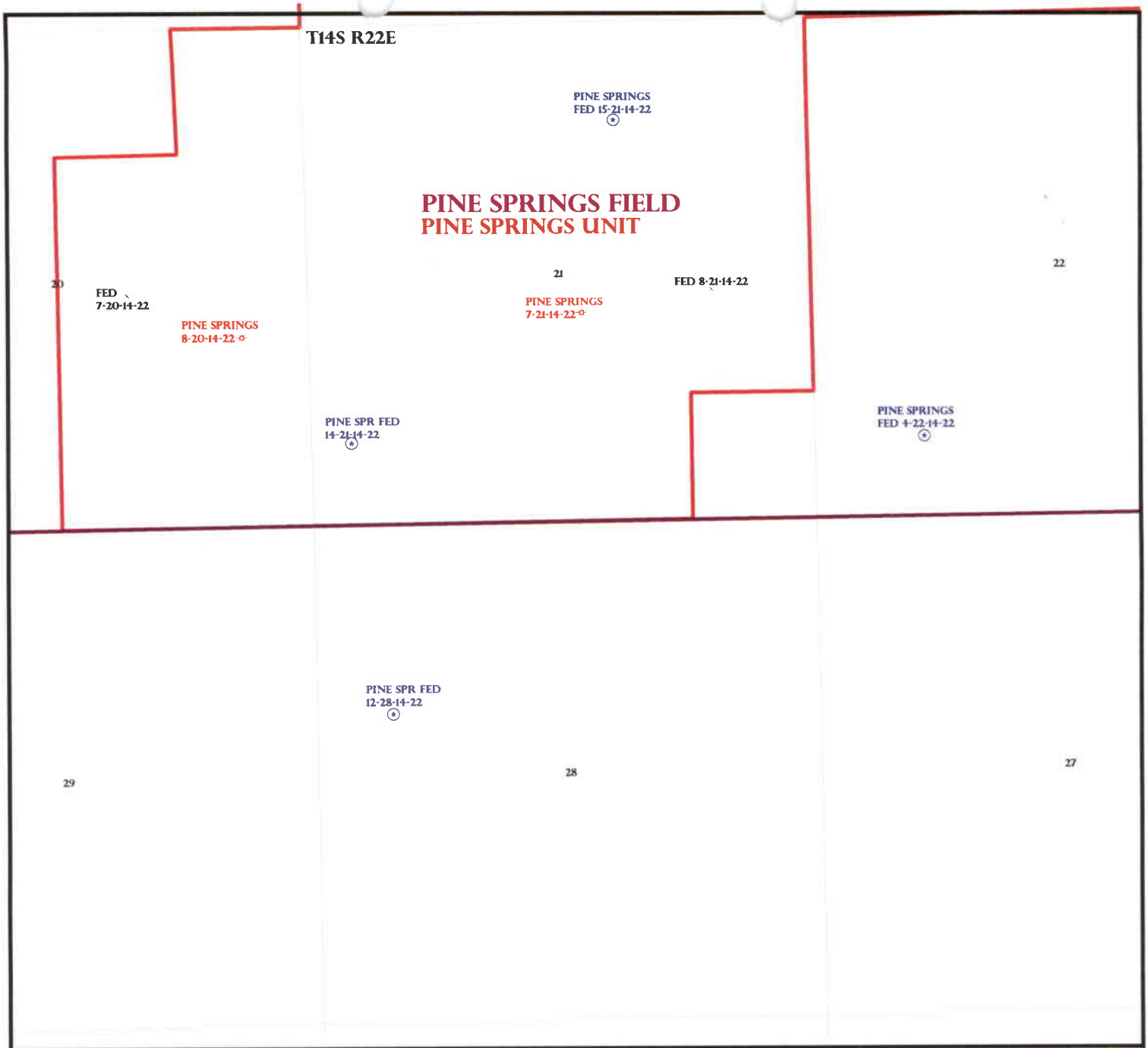
___ R649-3-3. Exception

___ Drilling Unit
Board Cause No: _____
Eff Date: _____
Siting: _____

___ R649-3-11. Directional Drill

COMMENTS: _____

STIPULATIONS: 1- Federal Approval
2- Spacing Stip



OPERATOR: PIONEER NAT RES (N5155)

SEC: 28 T.14S R. 22E

FIELD: UNDESIGNATED (002)

COUNTY: UINTAH

SPACING: R649-3-2 / GENERAL SITING

Field Status
- ABANDONED
- ACTIVE
- COMBINED
- INACTIVE
- PROPOSED
- STORAGE
- TERMINATED

Unit Status
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PENDING
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Wells Status
- GAS INJECTION
- GAS STORAGE
- LOCATION ABANDONED
- NEW LOCATION
- PLUGGED & ABANDONED
- PRODUCING GAS
- PRODUCING OIL
- SHUT-IN GAS
- SHUT-IN OIL
- TEMP. ABANDONED
- TEST WELL
- WATER INJECTION
- WATER SUPPLY
- WATER DISPOSAL
- DRILLING

UTAH DNR
OIL, GAS & MINING

N
W E
S

PREPARED BY: DIANA MASON
DATE: 27-NOVEMBER-2007

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil Gas and Mining

JOHN R. BAZA
Division Director

November 27, 2007

Pioneer Natural Resources USA, Inc.
1401 - 17th Street, Suite 1200
Denver, CO 80202

Re: Pine Spring Federal 12-28-14-22 Well, 2020' FNL, 807' FWL, SW NW, Sec. 28, T. 14 South, R. 22 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-39819.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Uintah County Assessor
Bureau of Land Management, Vernal Office

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • www.ogm.utah.gov

UTAH DNR OIL, GAS & MINING

Operator: Pioneer Natural Resources USA, Inc.

Well Name & Number Pine Spring Federal 12-28-14-22

API Number: 43-047-39819

Lease: UTU-10199

Location: SW NW **Sec.** 28 **T.** 14 South **R.** 22 East

Conditions of Approval

1. General

   Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

   Notify the Division within 24 hours of spudding the well.

   - Contact Carol Daniels at (801) 538-5284.

   Notify the Division prior to commencing operations to plug and abandon the well.

   - Contact Dustin Doucet at (801) 538-5281 office (801) 733-0983 home

3. Reporting Requirements

   All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

February 2, 2009

Pioneer Natural Resources USA, Inc.
1401 17th Street, Suite 1200
Denver, CO 80202

Re: APD Rescinded – Pine Spring Fed 12-18-14-22, Sec. 28, T. 14S, R. 22E Uintah County, Utah, API No. 43-047-39819

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on November 27, 2007. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective February 2, 2009.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason
Environmental Scientist

cc: Well File
Bureau of Land Management, Vernal

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING

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Division of Oil, Gas and Mining

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